

CHAPTER 3

SKU-2/A SEAT SURVIVAL KIT

Section 3-1. Description

3-1. GENERAL.

3-2. The SKU-2/A Seat Survival Kit (figures 3-1 and 3-2) is designed for use with the MK-GRU-7A and MK-GRUEA-7 ejection systems and functions as a seat for the aircrewman and as a container for an emergency oxygen system, liferaft and survival items. The survival kits, less Koch fittings, seat cushion and thigh support cushions are manufactured by East/West Industries P/N 221J100-1. The entire assembly is supplied by Grumman (CAGE 26512) and carries a P/N 128ES10065-13.

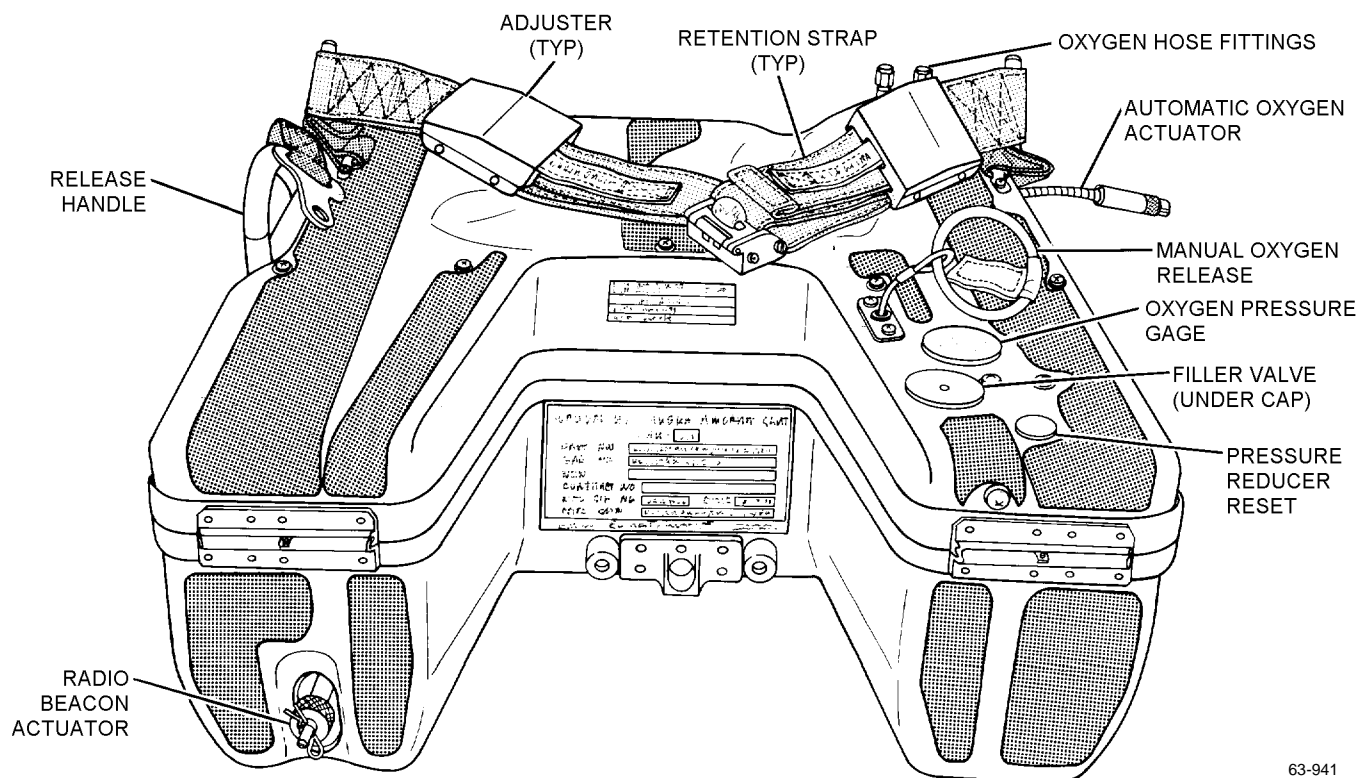
3-3. CONFIGURATION.

3-4. The SKU-2/A is a rigid-type container fabricated of molded fiberglass and contains equipment required for survival of the aircrewman after ejection. The SKU-2/A fits into the seat bucket, and is securely attached by lock receptacles at the lower aft corners of the seat bucket and a negative-g retaining pin receptacle at center forward on the lower container. During normal operation the kit provides support and comfort for the aircrewman, and a routing for emergency oxygen and communications. If failure occurs in the aircraft oxygen supply, or in case of high altitude or underwater ejection, the kit contains a 50 cubic inch, 1800 psi, emergency oxygen cylinder that provides an emergency supply of oxygen for approximately 20 minutes. The emergency oxygen pressure gage is visible through an opening in the left thigh support of the container when the thigh support cushion is removed. The lid of the container is fastened to a metal valence and contains the latches and oxygen equipment. The lower container contains the latching mechanism, liferaft and survival equipment, including an emergency radio beacon. The radio beacon actuator lanyard, located in the right front corner

of the lower container, is attached to the aircraft and is actuated when the aircrewman ejects. The two halves of the kit are securely fastened together by a lock and latch mechanism and can be quickly separated by the aircrewman for access to his liferaft and survival equipment by actuation of kit release handle. The container lid and the front section of the lower container are equipped with pile tape fastener which provides for firm attachment of the hook tape-equipped ventilated seat cushion and the non-ventilated thigh support cushions. A carrying handle is provided at the rear of the kit.

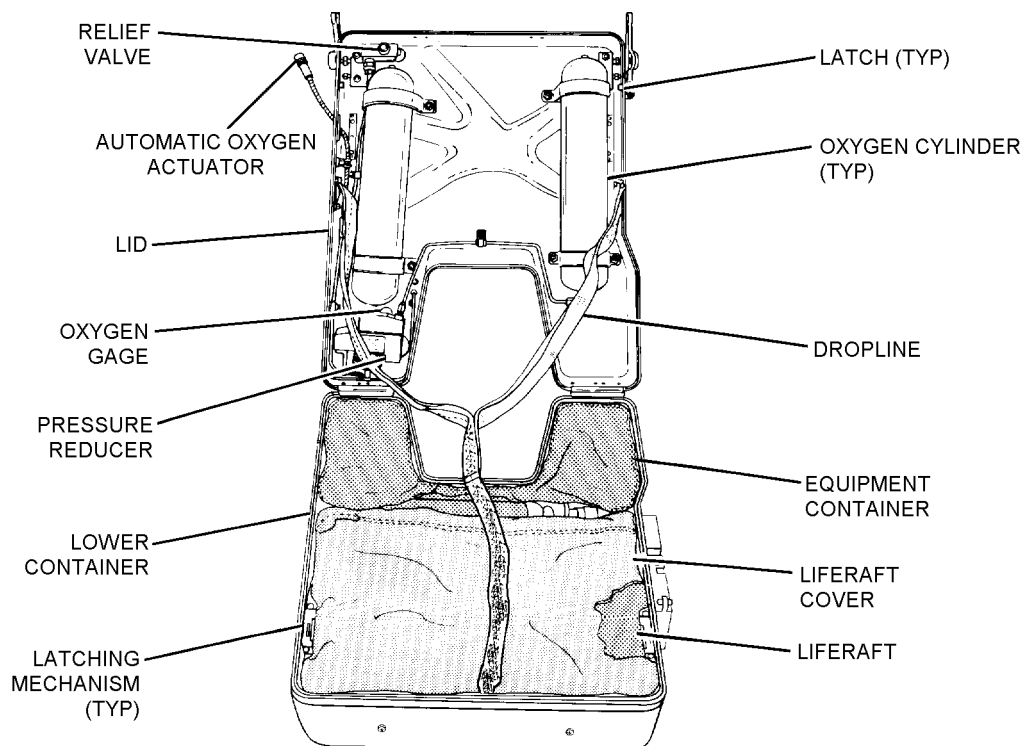
3-5. MK-GRUEA-7 and MK-GRU-7A (BUNO 159631 and subsequent). These ejection seats are equipped with one personnel service disconnect block secured to the left side of the ejection seat bucket. The personnel services connected to the block assembly consist of oxygen and communications, anti-g, vent air and an automatic oxygen release cable connection. The oxygen, vent air and anti-g supply flow directly through the block assembly to the aircrewman's anti-g garment, and the seat quick-disconnects.

3-6. MK-GRUEA-7 and MK-GRU-7A (BUNO 157980 thru 159630). This ejection seat is equipped with two personnel service disconnect blocks; the oxygen and communications and the anti-g and vent. Both blocks are secured to the left side of the ejection seat bucket. The personnel services connected to the oxygen and communication block are an oxygen and communications line, an emergency oxygen automatic release cable connection, and a block release lanyard. The personnel services connected to the anti-g and vent block are an anti-g hose, a block release lanyard and a vent air hose. The vent air hose may be connected to the seat, to a pressure suit or to an anti-exposure suit.



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Figure 3-1. SKU-2/A Closed



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Figure 3-2. SKU-2/A Open

3-7. SUBASSEMBLIES. The major subassemblies of the SKU-2/A are as follows:

1. Emergency Oxygen System
2. Upper and Lower Container
3. Handle Release Mechanism
4. Dropline Assembly
5. Cushions
6. Survival Equipment Container
7. Hose Assembly
8. Harness Assembly

3-8. REFERENCE NUMBERS, ITEMS AND SUPPLY DATA.

3-9. Figures 3-25 through 3-33 contain information on each assembly, subassembly and component part of the SKU-2/A. The figure and index number reference or part number, description, and units per assembly are provided.

3-10. APPLICATION.

3-11. The SKU-2/A is a part of the survival equipment used by aircrewmembers aboard aircraft listed in table 3-1.

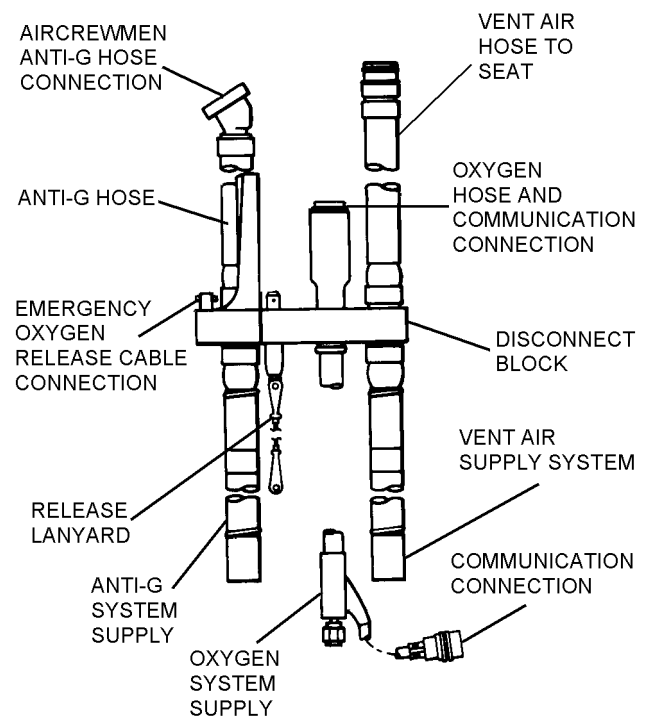
Table 3-1. SKU-2/A Application

| | | |
|---------------|------------|-----------|
| Escape System | MK-GRUEA-7 | MK-GRU-7A |
| Aircraft | EA-6B | F-14A |

3-12. FUNCTION.

3-13. When the aircrewman ejects from the aircraft the following series of events occur:

1. MK-GRUEA-7 and MK-GRU-7A (BUNO159631 and subsequent). The personnel services block (figure 3-3) is disengaged from the seat by a lanyard secured to the cockpit deck. As the seat continues up, the emergency oxygen lanyard, which is attached to the block, actuates the emergency oxygen. The lanyard separates from the survival kit and remains with the block. The radio beacon actuated by a lanyard attached to the cockpit deck provides a continuous signal during descent. The oxygen and communications, anti-g and vent air hoses then separate from the block in sequence, depending on the slack in each hose. During descent, while in the seat or after separation from the seat the aircrewman is provided with emergency oxygen until the supply is exhausted.



63-509

Figure 3-3. Personnel Services Disconnect MK-GRUEA-7 and MK-GRU-7A (BUNO159631 and Subsequent)

2. MK-GRU-7A (BUNO157980 thru 159630). The personnel service blocks (figure 3-4) are disengaged from the seat by two release lanyards which are secured to the deck of the aircraft. As the seat moves upward, the aircrewman's oxygen hose is disconnected from the oxygen-communications block. The emergency oxygen system, located in the survival kit, is actuated simultaneously by an automatic actuation lanyard connected to the oxygen-communications block. The lanyard breaks away from the survival kit and remains connected to the block, which remains with the aircraft. The radio beacon, also activated by a lanyard attached to the cockpit deck provides a continuous signal during descent. The anti-g-vent air block is divided into three parts; lower block, intermediate block and upper block. Upon ejection, the lower block disconnects from the intermediate block by a lanyard attached to the cockpit deck. When seat/ man separation occurs, the upper block remains with the aircrewman while the intermediate block remains with the seat.

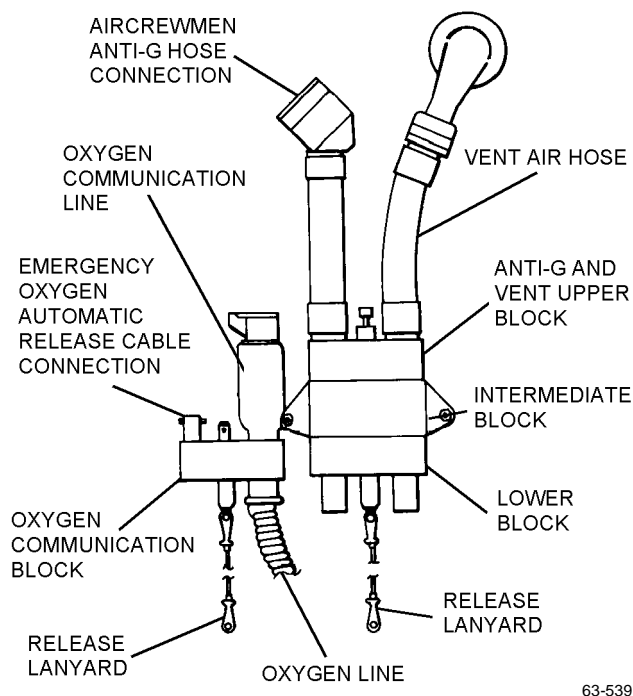


Figure 3-4. Personnel Services Block MK-GRU-7A (BUNO157980 thru 159630)

NOTE

If automatic actuation of the emergency oxygen system fails, the system can be actuated by pulling the manual oxygen release (figure 3-5).

3. When kit deployment is desired, the aircrewman pulls the kit release handle on the right side of the seat. As the lower container falls away, the dropline assembly connecting the two halves of the kit pulls out of the boots, and the liferaft is extracted from the lower container. When the lower container reaches the end of its free fall and the dropline becomes taut, the CO₂ inflation assembly is automatically actuated and the raft inflates. After entering the water, the aircrewman boards the raft and retrieves the lower half of the kit containing the survival equipment. The survival equipment is stored in a U-shaped container which is attached to the dropline by a length of nylon cord. The aircrewman may then desire to cut this nylon cord and remove the U-shaped container from the lower half of the kit. The U-shaped container is equipped with a retention lanyard and snaphook. The snaphook is fastened to the thong on the right slide fastener. The aircrewman then fastens the snaphook to his survival vest to ensure retention of both the container and all his survival equipment (figure 3-8).

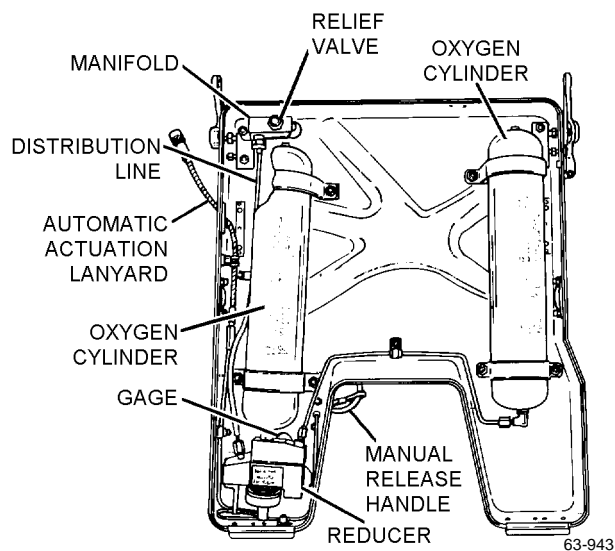


Figure 3-5. SKU-2/A Emergency Oxygen System

Section 3-2. Modification

3-14. GENERAL.

3-15. The following modifications to the SKU-2/A are required/authorized at this time. Refer to [Table 3-2](#).

Table 3-2. SKU-2/A Directives

| Description of Modifications | Applications | Modification Code |
|--|--------------------------------|-------------------|
| Incorporate Toggle Modification to Reducer Assembly Emergency Oxygen | All SKU-2/A Seat Survival Kits | 66-486 |

Section 3-3. Rigging and Packing

3-16. GENERAL.

3-17. Unless operational requirements demand otherwise, rigging and packing of the SKU-2/A shall be accomplished at the Intermediate Level of maintenance. All rigging and packing shall be performed only by qualified personnel every 448 days for F-14 aircraft or every 365 days for EA-6B aircraft.

NOTE

Quality assurance steps are provided for critical operations. When a step is underlined, the Aircrew Survival Equipmentman shall perform the operation and then have performance verified by Quality Assurance (QA).

3-18. RIGGING AND PACKING PROCEDURES.

3-19. Rigging and packing of the SKU-2/A is accomplished in eight separate operations as follows:

1. Preliminary Procedures
2. Radio Beacon Rigging and Installation
3. Survival Equipment Binding
4. Survival Equipment Packing
5. Stowing Dropline
6. Liferaft Preparation, Folding, Rigging and Packing
7. Closing Container

3-20. PRELIMINARY PROCEDURES. The following preliminary procedures shall be accomplished prior to rigging and packing the SKU-2/A.

1. Ensure SKU-2/A and components have been inspected in accordance with [Section 3-5](#).
2. Inspect oxygen hose assemblies in accordance with NAVAIR 13-1-6.3-1.
3. Remove upper container assembly from lower container assembly.
4. Remove liferaft cover. Inspect liferaft cover for damaged fabric and loose, broken, or frayed stitching.

WARNING

CO₂ bottle is under pressure. Use caution when disconnecting CO₂ bottle from liferaft. Do not loosen or attempt to remove inflation valve assembly from CO₂ cylinder.

CAUTION

Ensure actuating line is disconnected from CO₂ cylinder inflation valve before removal of CO₂ cylinder from liferaft.

5. Disconnect CO₂ cylinder from liferaft as follows:

- a. Carefully remove liferaft from container
- b. Disconnect actuation line from CO₂ cylinder
- c. Disconnect CO₂ cylinder from liferaft

d. Remove large loop of drop line from CO₂ cylinders neck

e. Ensure anti-chafing disc is installed. Reconnect CO₂ cylinder to liferaft finger tight. If functional test is required torque valve 80 to 90 in-lbs.

6. Ensure liferaft and CO₂ cylinder have been inspected in accordance with NAVAIR 13-1-6.1-1.

7. Remove dropline from boots and align kit components on a clean flat surface as shown.

NOTE

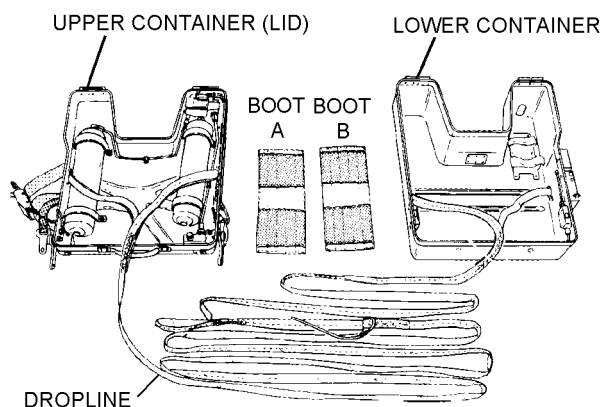
A newly fabricated or procured dropline assembly will have a final dimension of 26 feet, 4 inches \pm 2 inches. However, a dropline assembly is subjected to a certain amount of stretch during its stowing process, and shrinkage during its cleaning process, therefore a tolerance of \pm 12 inches is acceptable for an older dropline assembly.

8. Inspect dropline to ensure proper attachment to upper and lower containers. Also ensure dropline length is 26 feet, 4 inches \pm 12 inches.

9. Ensure survival items have been inspected in accordance with NAVAIR 13-1-6.5.

NOTE

Ensure battery service life does not expire prior to the next scheduled inspection cycle of the assembly in which the radio set is installed. Refer to NAVAIR 16-30URT33-1 for battery service life.



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Step 7 - Para 3-20

10. Remove radio beacon set from kit and ensure that the battery and radio beacon have been inspected in accordance with NAVAIR 16-30URT33-1.

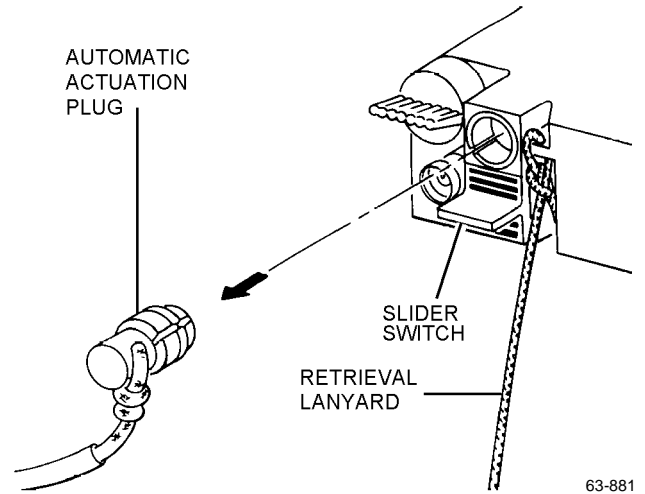
11. Check seat pan and cushion assembly for cuts, tears, and abrasions, and hardware for security of attachment, corrosion, damage, wear, and ease of operation.

3-21. RADIO BEACON RIGGING AND INSTALLATION. To rig and install the AN/URT-33A radio beacon, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|---|--------------------------------------|
| 1 | Beacon Set, Radio AN/URT-33A | MIL-B-38401A |
| 1 | Actuator Indicator Assembly | CL204D3-11 (CAGE 80206) |
| 1 | Pin, Cotter, Hairpin | LHCOTC (CAGE 96652) NIIN 00-956-5635 |
| 3 | Rubber Bands (Type I) | MIL-R-1832 NIIN 00-568-0323 |
| As Required | Thread, Nylon, Type II, Class A, Size E | V-T-295 NIIN 00-244-0609 |

1. Remove automatic actuation plug and lanyard from radio beacon assembly.



Step 1 - Para 3-21

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|-------------|--|
| 1 | T-wrench | Fabricate IAW paragraph 3-72 |

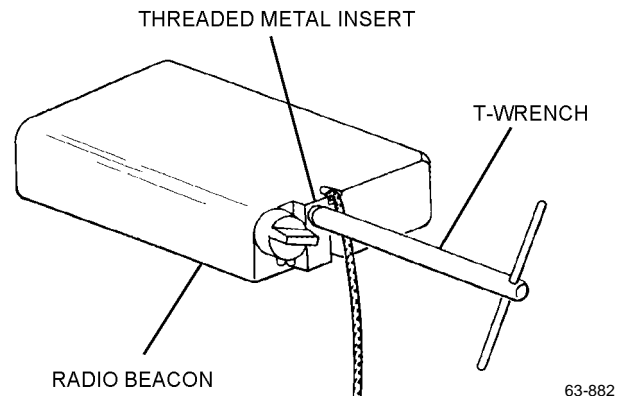
2. Remove threaded metal insert from beacon with T-wrench. To fabricate T-wrench, refer to [paragraph 3-72](#).

NOTE

Ensure that slider switch on radio beacon is OFF. Slider switch is in OFF position when word ON is not visible on radio beacon housing.

Determine if beacon has been modified in accordance with [steps 1 through 3](#) before proceeding to [step 4](#).

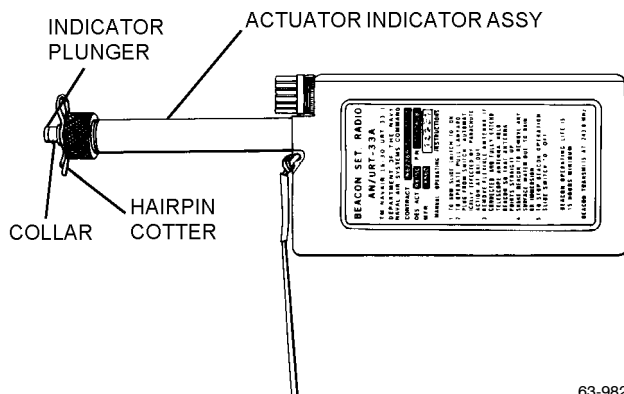
Retain automatic actuation plug with lanyard and metal insert in shop for possible future use.



Step 2 - Para 3-21

NAVAIR 13-1-6.3-2

3. Screw actuator indicator (P/N CL204D3-11) into beacon.



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Step 3 - Para 3-21

4. Hold indicator plunger depressed and insert hairpin cotter. Ensure that indicator plunger is retained in pressed position.

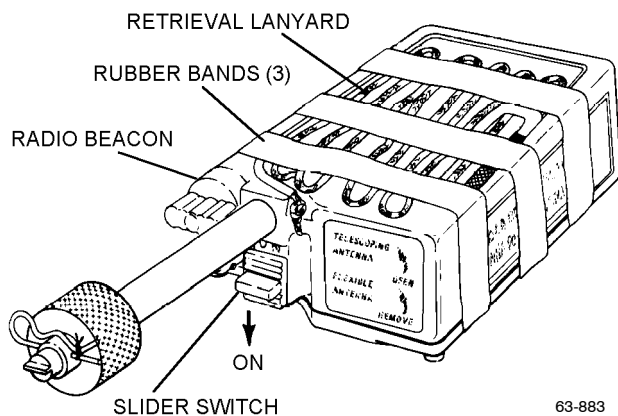
5. Ensure hairpin in cotter and collar are free to rotate 360° without binding. If hairpin cotter and collar are free, proceed to step 6. If hairpin cotter and collar do not rotate, refer to NAVAIR 16-30URT33-1.

6. Safety-tie open end of actuator indicator hairpin cotter by applying single-loop mousing, using size E nylon thread. Secure mousing loop with square knot. Cut off excess approximately 1/8 inch from knot.

NOTE

Do not release indicator plunger with beacon slider switch in ON (armed) position. Beacon will transmit an inaudible emergency distress signal.

7. Accordion-fold retrieval lanyard on top of radio beacon and secure with three rubber bands (MIL-R-1832, Type I). Ensure retrieval lanyard is attached at both ends with a bowline knot, with an overhand knot tied at the tag end.



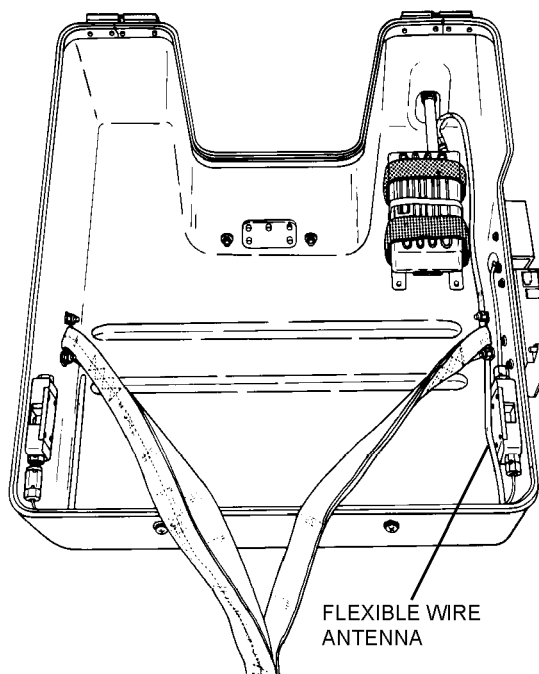
63-883

Step 7 - Para 3-21

8. Connect flexible wire antenna to beacon.

9. Place ON/OFF slider switch in ON position and install beacon assembly in bracket in lower container. Position beacon in bracket with indicator plunger, collar, and hairpin cotter extending through appropriate hole in right front of container. Check to ensure slider switch is in ON position then secure beacon with hook and pile tape fasteners.

10. Route flexible wire antenna aft along right side of lower container.



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Step 10 - Para 3-21

3-22. SURVIVAL EQUIPMENT BINDING. Ensure all survival items have been inspected in accordance with NAVAIR 13-1-6.5 before binding. To bind survival items, proceed as follows (table 3-3).

NOTE

To prevent loss of survival items, tie items individually and then tie to 140-inch length of nylon cord. Nylon cord of prescribed lengths required for this procedure shall be seared at both ends to prevent fraying (table 3-4).

Table 3-3. Survival Kit Items (Note 1)

| Item Name | Quantity | Reference Number |
|---|----------|-------------------|
| Cord, (Nylon), Fibrous Type I | 50 ft | NAVAIR 13-1-6.5 |
| Signal, (Flare), Smoke and Illumination, MK-13 MOD 0 or MK-124 MOD 0 (Note 2) | 2 | NAVAIR 13-1-6.5 |
| Sea (Dye) Marker, Fluorescent | 2 | NAVAIR 13-1-6.5 |
| Sponge, (Bailing), Cellulose Type II, Class 2 | 1 | NAVAIR 13-1-6.5 |
| SRU-31/P Survival Kit, Packet #1 (Medical) (Note 3) | 1 | NAVAIR 13-1-6.5 |
| SRU-31/P Survival Kit, Packet #2 (General) (Note 3) | 1 | NAVAIR 13-1-6.5 |
| SRU-31A/P (Note 7) | Optional | NAVAIR 13-1-6.5 |
| Water, Drinking, Canned (Note 4) | 1 | NAVAIR 13-1-6.5 |
| Bag, Drinking Water (50 ml) (Note 5) | 6 | NAVAIR 13-1-6.5 |
| or Water, Drinking, Emergency (118 ml) (Note 5) | 3 | NAVAIR 13-1-6.5 |
| Opener, Can, Hand (Note 6) | 1 | NAVAIR 13-1-6.5 |
| Ground/Air Emergency Code Card | 1 | NAVAIR 13-1-6.5 |
| Blanket, (Combat) Casualty, 3 oz | 1 | NAVAIR 13-1-6.5 |
| Envelope, Packing List | 2 | NAVAIR 13-1-6.5 |
| Beacon Set, Radio | 1 | NAVAIR 13-1-6.5 |
| Liferaft, Inflatable | 1 | NAVAIR 13-1-6.1-1 |

Notes: 1. The items listed are typical and are considered mandatory for inclusion in the survival kit container. Deviation from the listed items may be required by certain Functional Air Wings (FUNCWINGS), Carrier Air Wings (CVW), COMFAIRS, or Marine Air Wings (MAW). Requests for deviations must be forwarded to and authorized by TYCOMS and with information to Fleet Support Team (FST) at NAVAIRWARCENACDIV Patuxent River MD via Naval Message. When optional items are substituted, particular attention must be paid to the binding sequence so that physical sizes and binding order of substituted items remain approximately the same. That portion of an item name in parentheses is a common-use name or container size and is not intended for supply requisition purposes.

Table 3-3. Survival Kit Items (Note 1) (Cont)

- Notes:
- 2. MK-13 MOD 0 shall be used until stocks are depleted. MK-124 MOD 0 will replace MK-13 MOD 0 as stocks become available.
 - 3. SRU-31/P complete kits including Medical Packet (#1) and General Packet (#2) may be ordered; instructions for packing and ordering these kits are found in NAVAIR 13-1-6.5.
 - 4. When the supply for emergency canned water has been exhausted, use bagged drinking water and remove can opener.
 - 5. If Bag, Drinking Water (50 ml), is not available, substitute Water, Drinking, Emergency (118 ml), in accordance with NAVAIR 13-1-6.5
 - 6. If canned water is not being used, there is no need to pack can opener.
 - 7. The selection of SRU-31/P or SRU-31A/P Individual Aircrewmember's Survival Kit will be at the discretion of the TYPE COMMANDER depending on mission requirements, reference NAVAIR 13-1-6.5, Chapter 9, for detailed information.

Table 3-4. Nylon Cord Lengths Required for Binding

| Length (Inches) | Number Required |
|--------------------|--------------------|
| 140 | 1 |
| 12 (Note 1) | 5 |
| 30 | 1 |
| 36 | 2 |
| 40 | 3 |
| 50 (Note 1) | 1 |

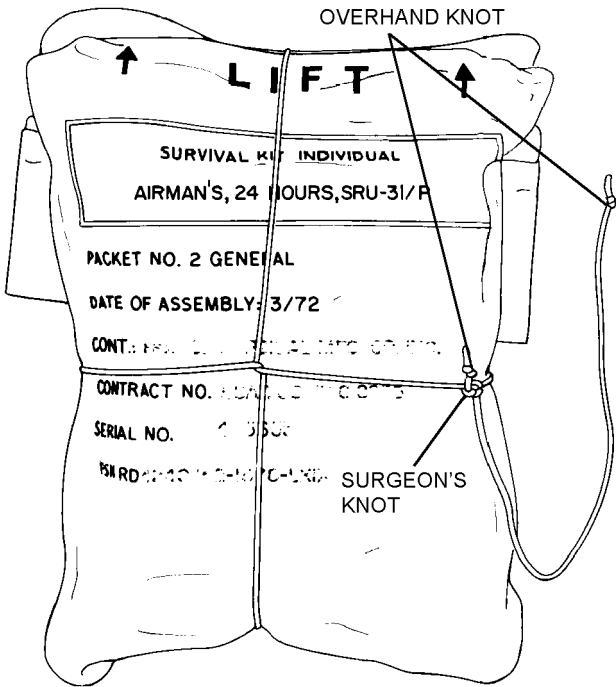
Notes:

- 1. When using bagged water in place of canned emergency water, the number of required 12 inch lengths will be a total of 6 and the required 50 inch lengths will be 0.

NOTE

SRU-31/P Packet #1 (Medical) shall be folded approximately in half prior to tying.

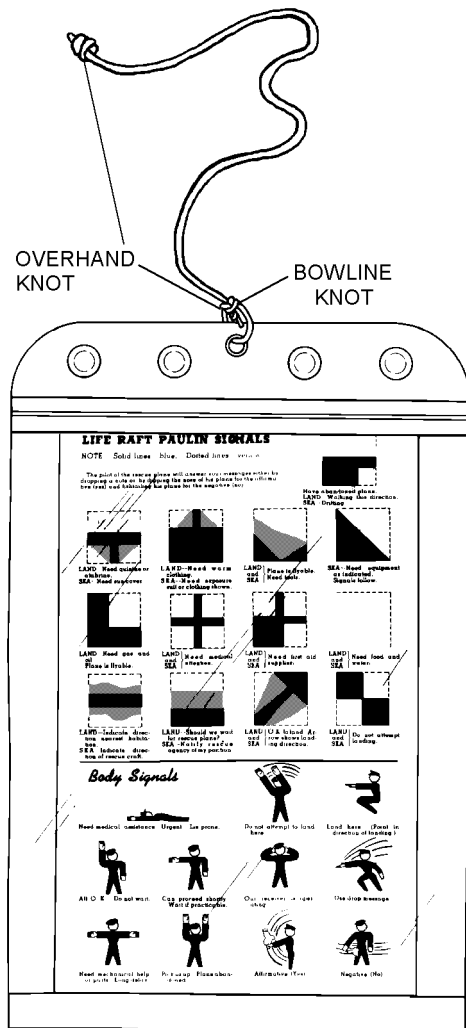
- 1. Tie an overhand knot in each end of a 40-inch length of nylon cord. Wrap cord around packet #1 of the SRU-31/P Survival Kit. Rotate cords 1/4 turn and wrap cord around opposite sides of packet. Tie with a surgeon's knot. Ensure cord-end overhand knot is positioned snugly against surgeon's knot. Tie packet #2 in same manner, except do not fold.



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Step 1 - Para 3-22

2. Insert Ground/Air Emergency Code card into a clear vinyl envelope (MIL-B-117), and close sealing fastener. Tie an overhand knot in each end of a 12-inch length of nylon cord, and pass knot through center hole in envelope. Tie a bowline with a 1-inch loop. Ensure cord-end overhand knot is snugly against bowline knot.



63-700

Step 2 - Para 3-22

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3. Tie an overhand knot in each end of a 50-inch length of nylon cord. Wrap one end of cord two overlapping turns around end of canned water and tie with surgeon's knot positioned snugly against cord-end overhand knot. Route cord to opposite end of can. Wrap cord two overlapping turns around can and tie with surgeon's knot followed by an overhand knot positioned snugly against surgeon's knot. Cord between end-ties shall be drawn tight.

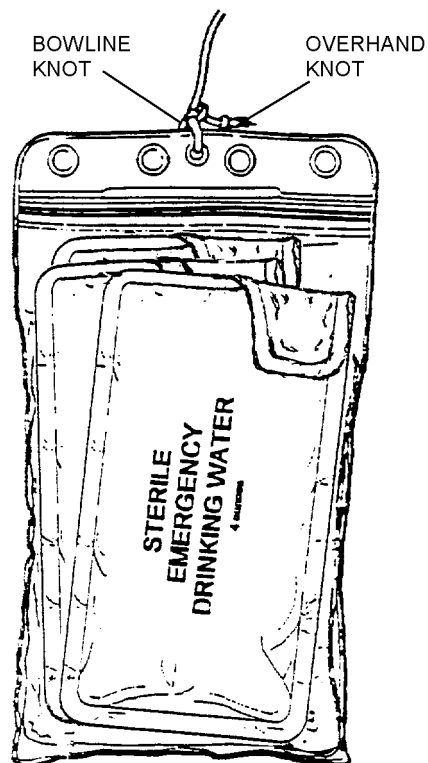


Step 3 - Para 3-22

NOTE

Replacement rate of exhausted canned water shall be in accordance with the NAV-AIR 13-1-6.5 manual. Bagged emergency drinking water shall be stowed in the same order as canned emergency water. The bags of water shall be stowed in a flat configuration.

4. Bagged water. Place a maximum of three 4-ounce bagged emergency drinking water flat inside a clear vinyl envelope (MIL-B-117) with pour spout folded down. Bagged water must be able to fit into envelope without disrupting the closure of the sealing slide fastener. Using a 12-inch length of cord, tie an overhand knot on each end and pass knot through center hole in envelope. Secure with bowline knot, allowing an approximate 1-inch loop. Position an overhand knot snugly against the bowline knot. Ensure overhand knot is snug against surgeon's knot.

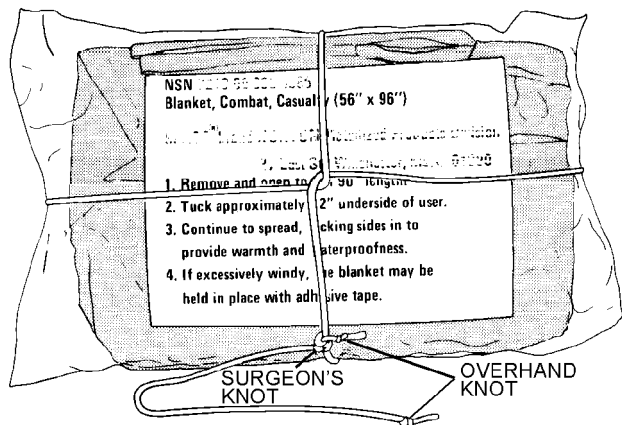


Step 4 - Para 3-22

63-22

NAVAIR 13-1-6.3-2

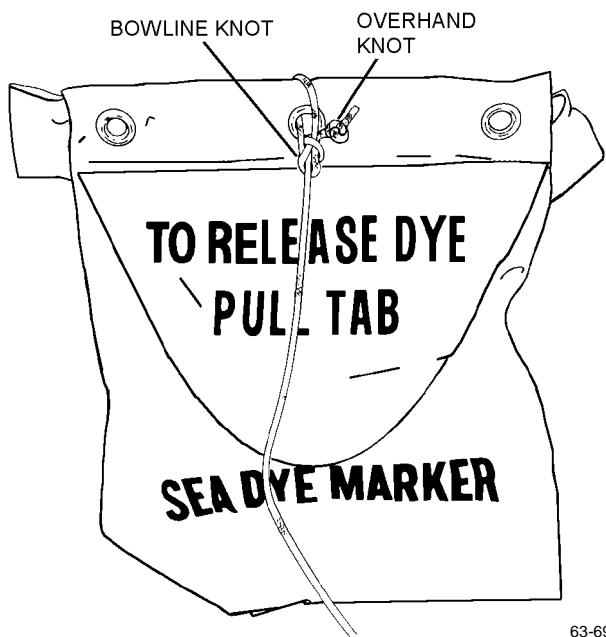
5. Tie an overhand knot in each end of a 40-inch length of nylon cord. Wrap cord around the combat casualty blanket. Rotate cords 1/4 turn as shown, and wrap cord around opposite side of blanket. Tie with a surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



63-944

Step 5 - Para 3-22

6. Tie an overhand knot in each end of a 12-inch length of nylon cord. Pass overhand knot through center grommet in dye marker, and tie a bowline with a 1-inch loop. Ensure overhand knot is snugly against bowline.



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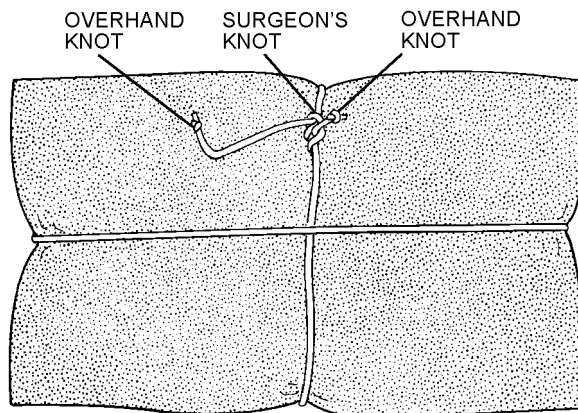
Step 6 - Para 3-22

7. Tie second dye marker in same manner as step 5.

NOTE

Compress bailing sponge to minimum thickness while wet, and allow to dry in the compressed state before tying.

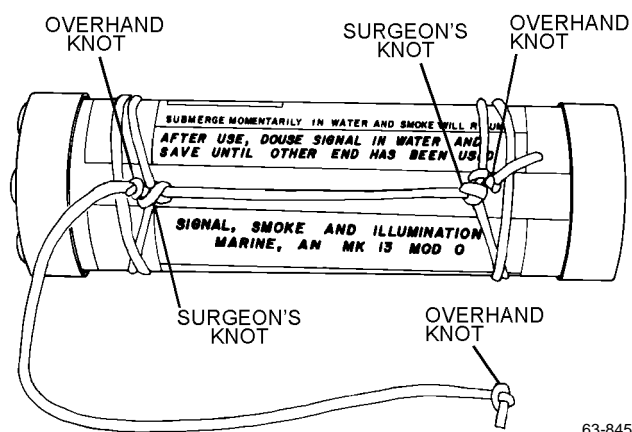
8. Tie an overhand knot in each end of a 30-inch length of nylon cord. Wrap cord around bailing sponge, then rotate cords 1/4 turn as shown. Wrap cord around opposite side of sponge and tie with a surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



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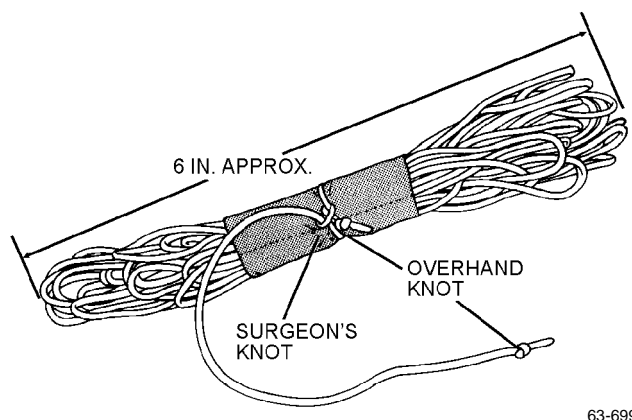
Step 8 - Para 3-22

9. Tie an overhand knot in each end of a 36-inch length of nylon cord. Wrap one end of cord two overlapping turns around end of signal flare (MK-13 MOD 0 or MK-124 MOD 0) and tie with surgeon's knot positioned snugly against cord-end overhand knot. Route cord to opposite end of flare. Wrap cord two overlapping turns around end of flare and tie with surgeon's knot followed by an overhand knot positioned snugly against surgeon's knot. Cord between end-ties shall be drawn tight. Tie second flare in same manner.



Step 9 - Para 3-22

10. Accordion fold the 50-foot length of Type I nylon cord in 6-inch bights. Cut a 2 x 3-inch piece of nylon duck material, and wrap the material around the center of the folded cord. Tie an overhand knot in each end of a 12-inch length of nylon cord, and secure one end around the center of the nylon duck material with surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



Step 10 - Para 3-22

CAUTION

Ensure pointed end of can opener is wrapped with adequate chafing material to prevent damage to other survival items.

11. Tie an overhand knot in each end of a 12-inch length of nylon cord. Pass overhand knot through hole in can opener, and tie a bowline knot with a 1-inch loop. Ensure overhand knot is snugly against bowline. Wrap pointed end of can opener with chafing material and secure in place with a rubber band ([figure 3-6](#)).

12. Ensure survival items are properly tied.

13. Using the 140-inch length of Type I nylon cord, form a 3/4 to 1-inch overhand loop knot approximately 12 inches from one end. Continue forming these loops every five inches until a total of 12 loops are completed. Ensure a minimum of 25 (± 1) inches of cord remains after forming last overhand loop.

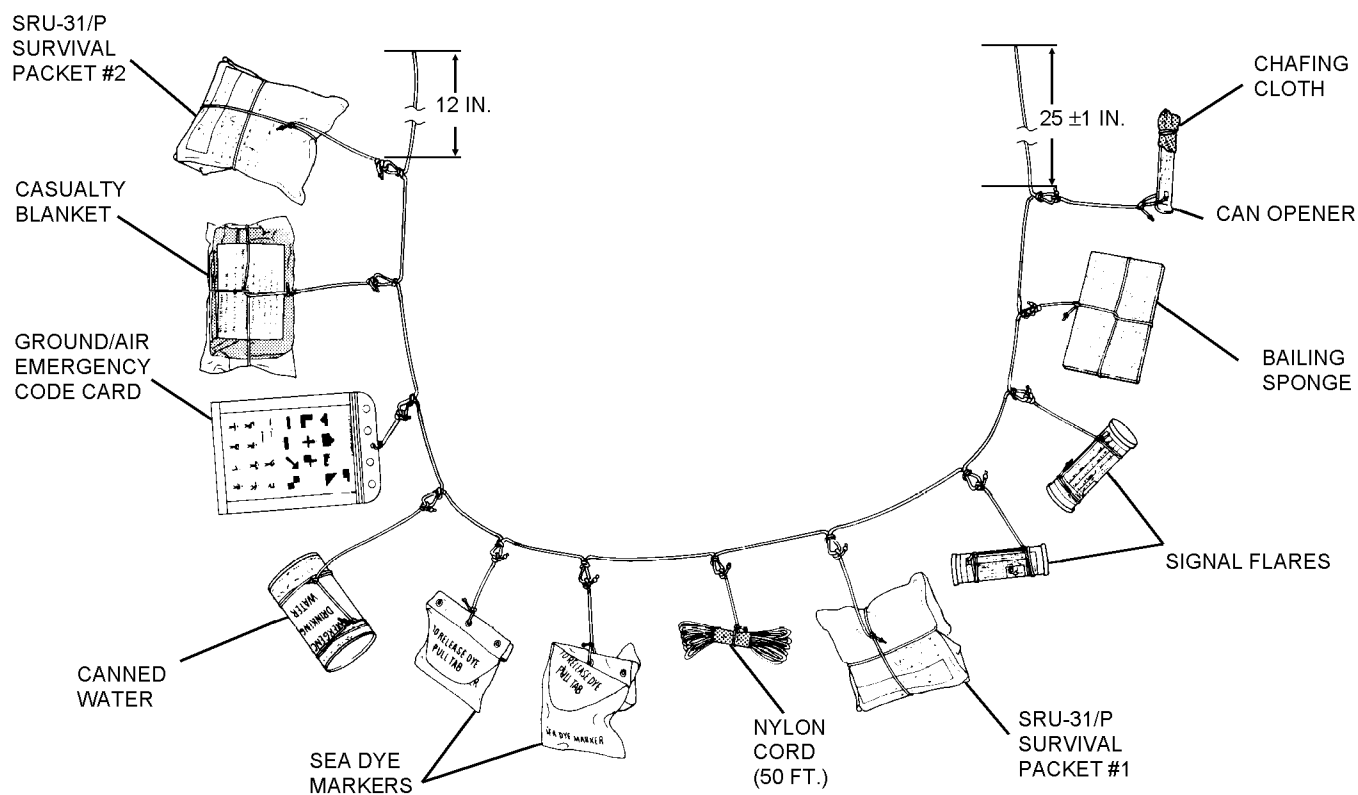
NOTE

Tie survival items to 140-inch cord in the order shown in [figure 3-6](#).

14. Tie each item to a loop with a surgeon's knot. Position cord-end knot snugly against surgeon's knot.

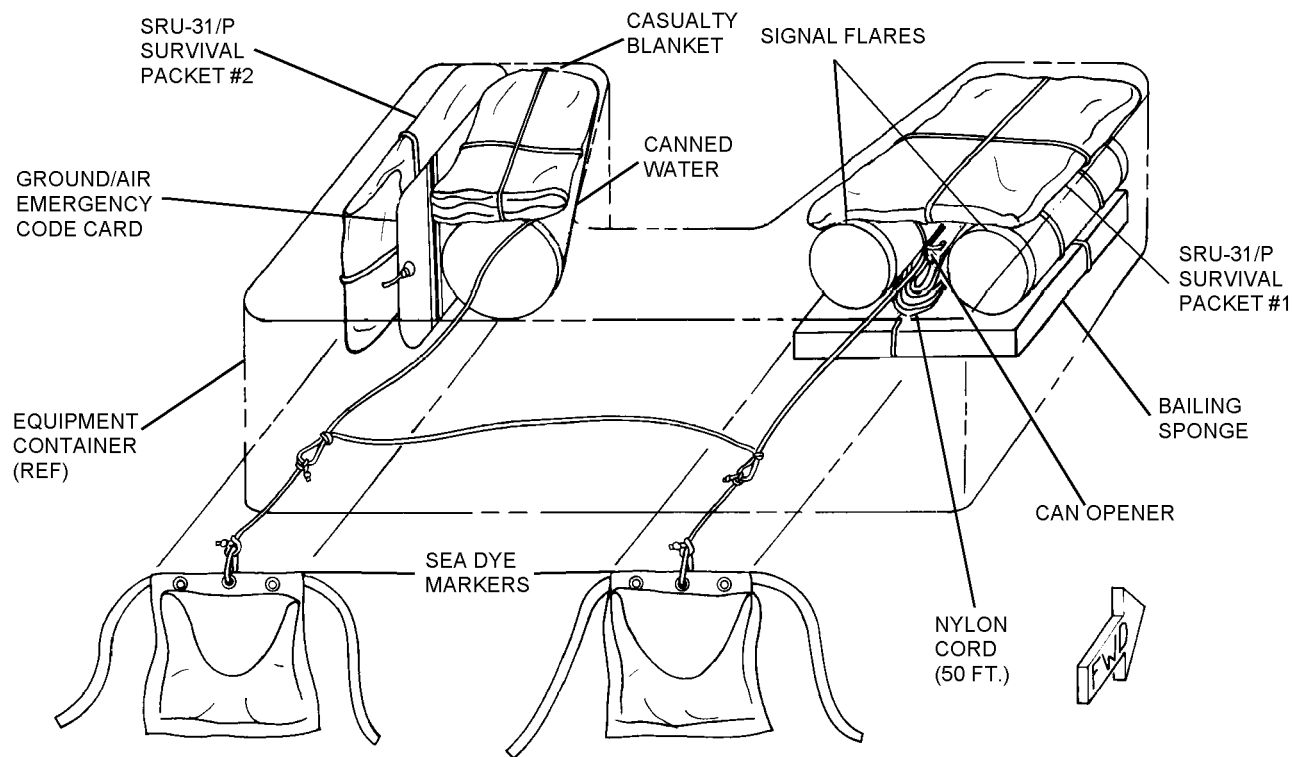
3-23. SURVIVAL EQUIPMENT PACKING. To pack survival equipment into the survival equipment container, proceed as follows ([figure 3-7](#)).

1. Place equipment container on table with attaching loops toward packer, and the word EQUIPMENT up.



63-945

Figure 3-6. Binding Survival Items



63-946

Figure 3-7. Stowing Survival Equipment

2. Attach bitter end (closest to can opener) of 140-inch length of nylon cord (with attached survival items) to the loop provided in the forward end of the right leg section of equipment container. Tie with a 2-inch loop bowline and an overhand knot. Ensure overhand knot is snugly against bowline.

3. Stow bailing sponge on bottom surface of the right leg pocket.

4. Place 50-foot length of nylon cord on top of sponge.

NOTE

Remove can opener if stowing bagged water.

5. Place can opener, point aft and down, on top of nylon cord.

6. Place a signal flare on top of sponge along each side of can opener and cord.

7. Stow SRU-31/P survival kit packet #1 on top of the two signal flares.

8. Place one dye marker vertically against equipment stowed in right leg.

9. Starting at opposite end of the 140-inch cord, place SRU-31/P survival kit packet #2 against outboard wall of left leg pocket.

10. Place can of water alongside the SRU-31/P packet.

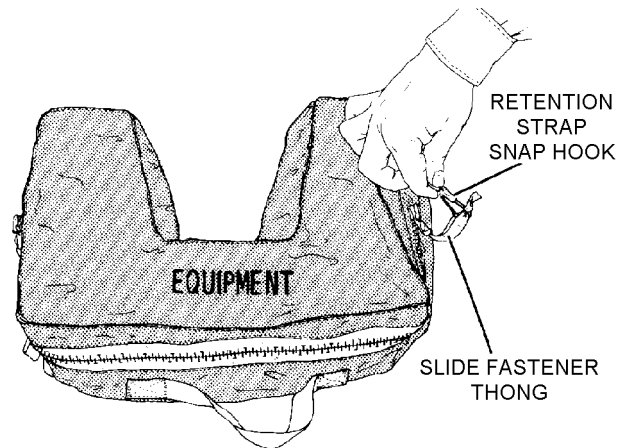
11. Fold Ground/Air Emergency Code card in half, and slide in between SRU-31/P packet and water can.

12. Place casualty blanket on top of water can.

13. Place second dye marker vertically against the equipment stowed in left leg.

14. Check stowage with [figure 3-7](#). Ensure all equipment is in leg pockets and a void space remains at aft end of equipment container.

15. Route equipment container retention strap snaphook out right side of equipment container. Close equipment container and connect retention lanyard snaphook to thong on slide fastener.



63-968

Step 15 - Para 3-23

NOTE

All tacking cord shall be coated with a mixture of 50% beeswax and 50% paraffin. The cord may be dipped in a melting pot 160° to 200° or drawn across a solid block of the mixture.

16. Place equipment container in forward section of lower container. Cut a 52 ±1-inch length of Type III nylon cord (MIL-C-5040), and sear ends. Secure cord to equipment container and dropline and tack ([figure 3-8](#)).

3-24. STOWING DROPLINE. To stow dropline in boots, proceed as follows:

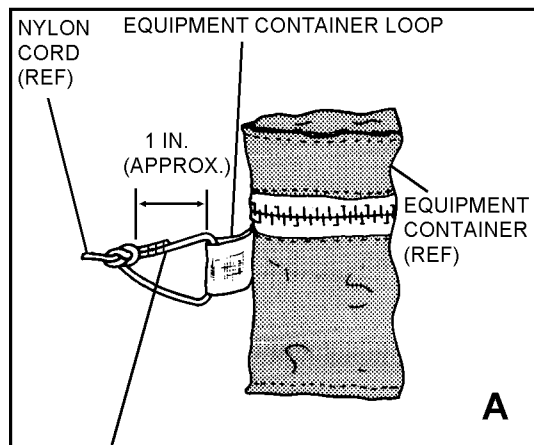
NOTE

Stowage boots are referred to as boot A and boot B for identification purposes only. There are no physical differences between boots and the letters A and B do not actually appear on them.

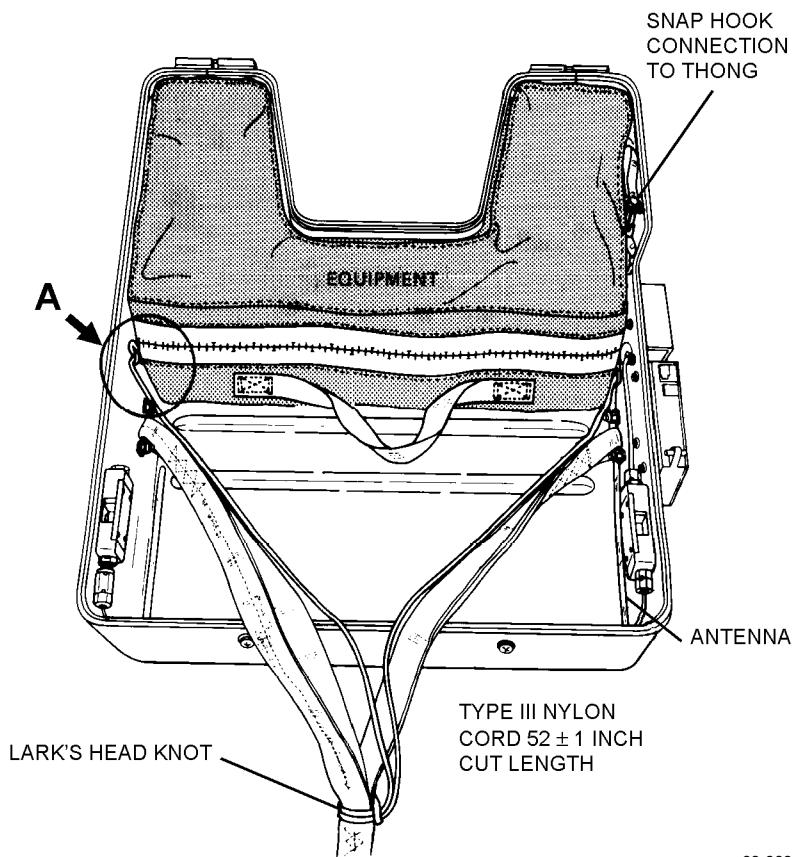
Numbers on stowage channels of boots correspond to dropline bights and the order in which they are to be stowed. Numbers appear in illustration for clarity, they do not actually appear on stowage boots.

The identification yarn on earlier fabricated dropline assemblies may be located on the underside of the webbing. However, procedural steps depicting identification yarn location will be reversed throughout the dropline stowage procedures for these assemblies. Future fabrication of the dropline for the SKU-2/A will be in accordance with [paragraph 3-71](#).

1. Lay dropline out flat between container halves with dropline loops up. Remove all twists from dropline prior to beginning stowing operation.



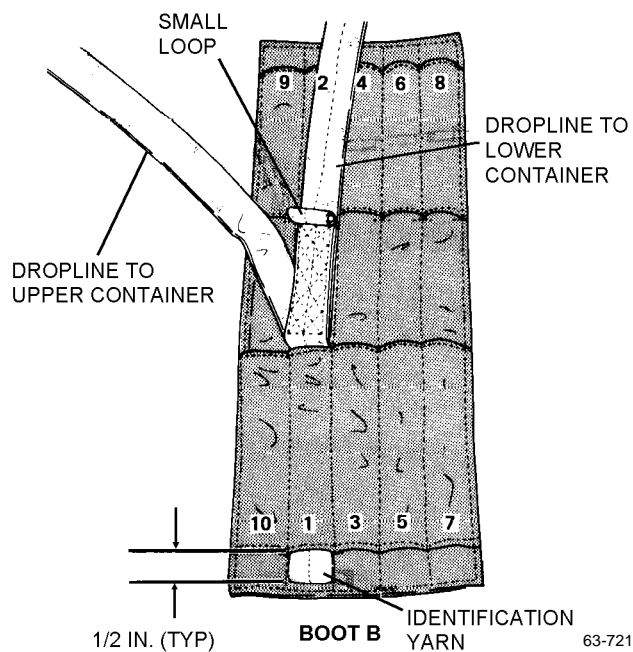
BOWLINE KNOT
TACKLING — 3 TURNS
SIZE E NYLON THREAD,
SINGLE, TIE ENDS WITH
SURGEON'S KNOT
FOLLOWED BY A
SQUARE KNOT



63-963

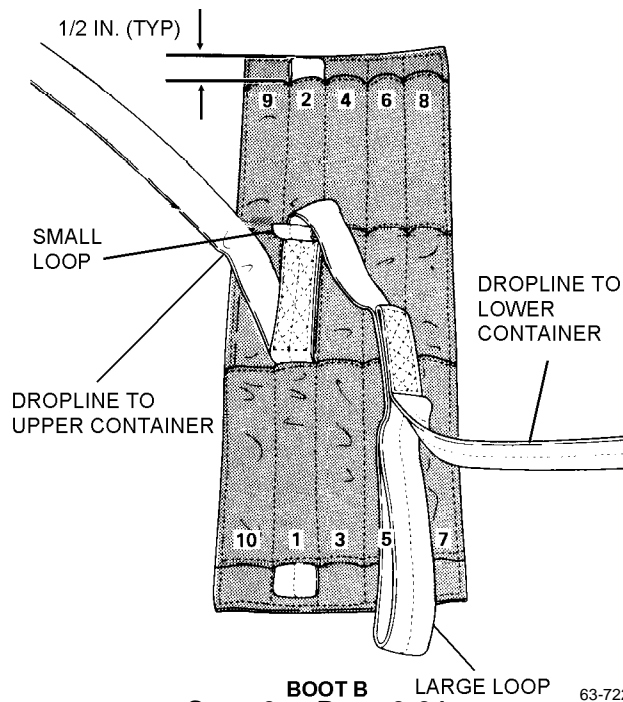
Figure 3-8. Stowed Survival Equipment Container

2. Position boot B to the left of lower container. Form the first bight 5 \pm 1/2 inch from base of small loop stitching. Bight shall be in portion of dropline going to upper container and small loop shall face up. Stow bight in channel 1 of boot B. Push bight into channel with a 7-inch length of 3/8-inch hardwood dowel tapered at one end. There shall be a 1/2-inch protrusion at end of channel and identification yarn shall be visible at protrusion.



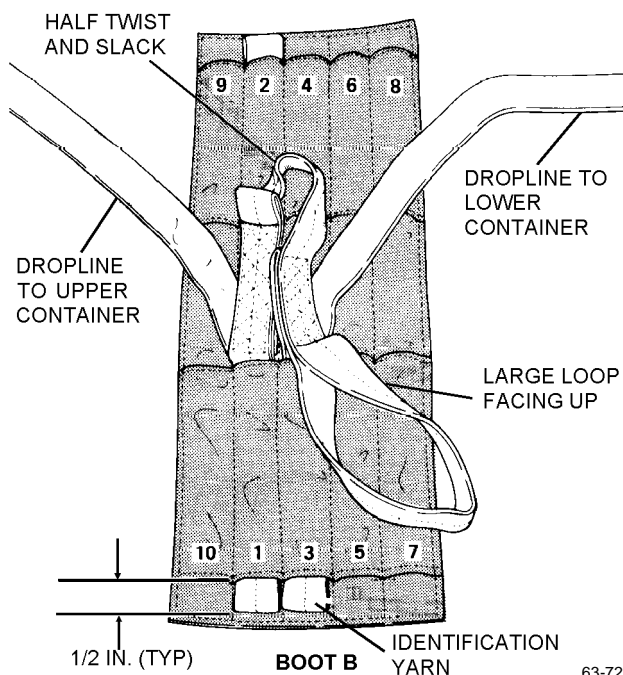
Step 2 - Para 3-24

3. Second bight shall be formed in portion of dropline going from small loop to large loop and shall be stowed in channel 2. Identification yarn shall not show at protrusion.



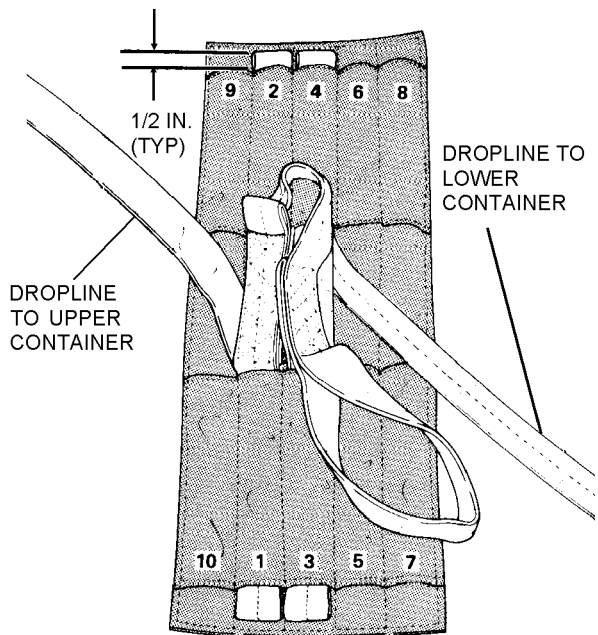
Step 3 - Para 3-24

4. Place a half-twist in dropline by rotating clockwise so that large loop faces up. Stow third bight in channel 3. A small amount of slack may exist between bights 2 and 3. Identification yarn shall be visible at protrusion.



Step 4 - Para 3-24

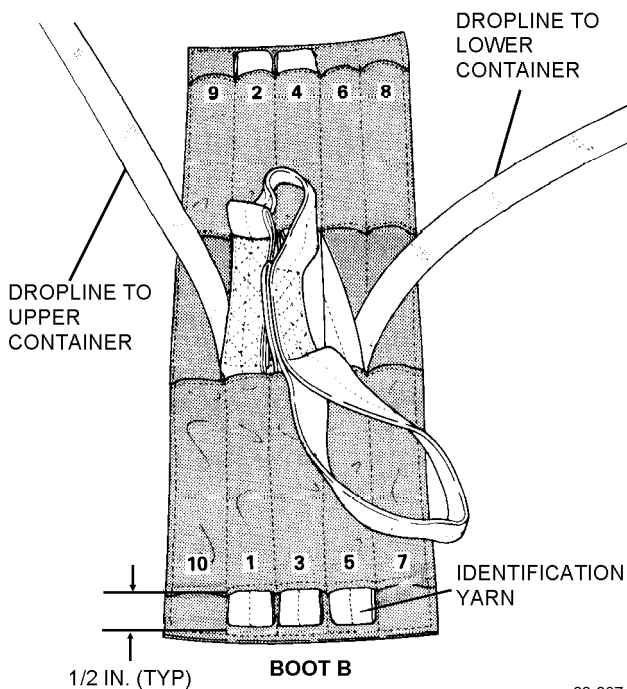
5. Stow fourth bight in channel 4, ensuring that identification yarn does not show at protrusion.



63-906

Step 5 - Para 3-24

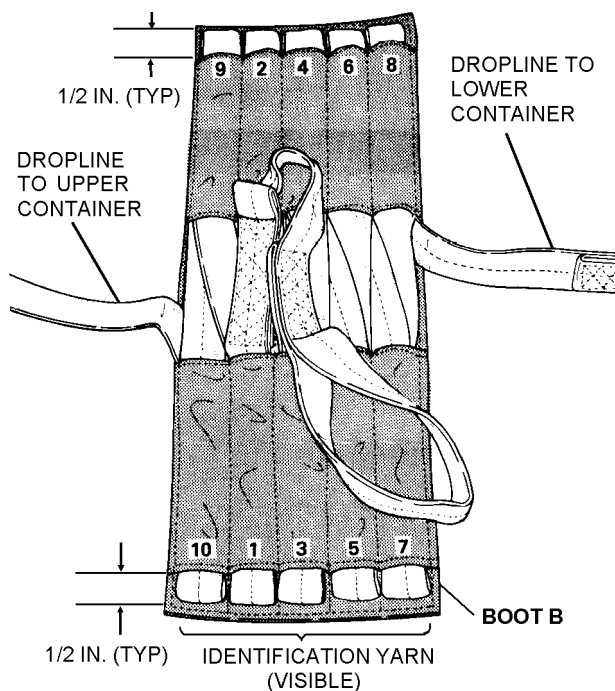
6. Stow fifth bight in channel 5, ensuring that identification yarn is visible at protrusion.



63-907

Step 6 - Para 3-24

7. Stow remainder of dropline in boot B in accordance with numbering sequence on boot as shown, maintaining 1/2-inch protrusion. If there is insufficient line, due to allowable tolerance in length of dropline, a full stow may be impossible in channel 8.



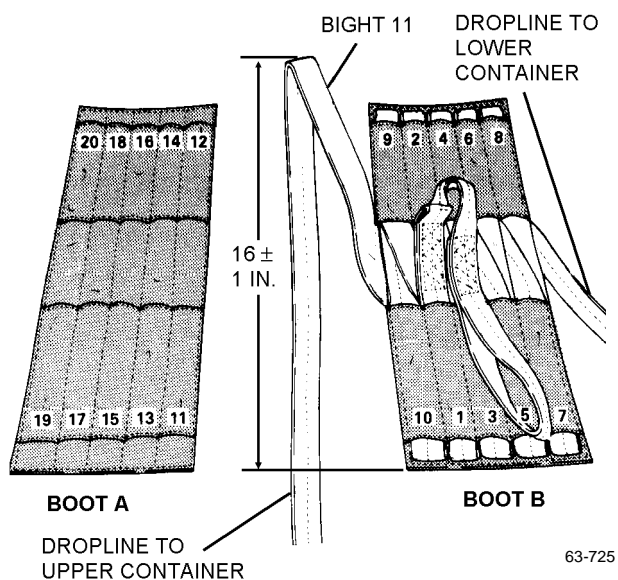
63-724

Step 7 - Para 3-24

NOTE

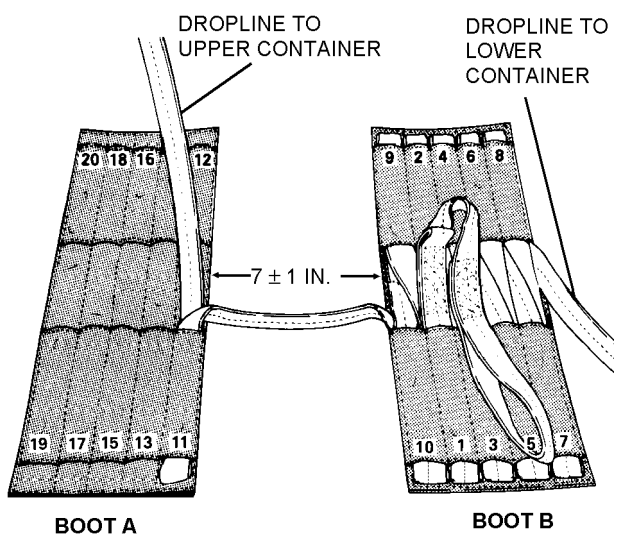
Upon the completion of [step 7](#), identification yarn shall be visible at channels 1, 3, 5, 7 and 10, and shall not show at channels 2, 4, 6, 8 and 9.

8. Form bight 11 in dropline 16 \pm 1 inch from bottom of last bight (bight 10) in boot B.



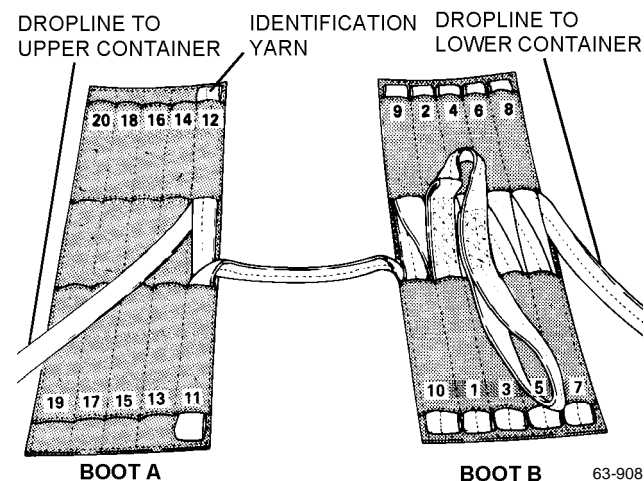
Step 8 - Para 3-24

9. Stow bight 11 (formed in [step 8](#)) in channel 11 of boot A. There shall be 7 \pm 1 inch of dropline between boots A and B when bight 11 is stowed. Identification yarn shall not show at protrusion.



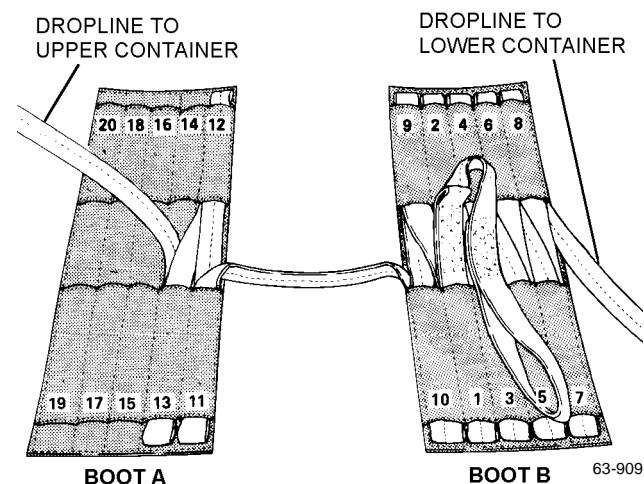
Step 9 - Para 3-24

10. Stow bight 12 in channel 12 of boot A. Identification yarn shall be visible at protrusion.



Step 10 - Para 3-24

11. Stow bight 13 in channel 13. Identification yarn shall not show at protrusion.



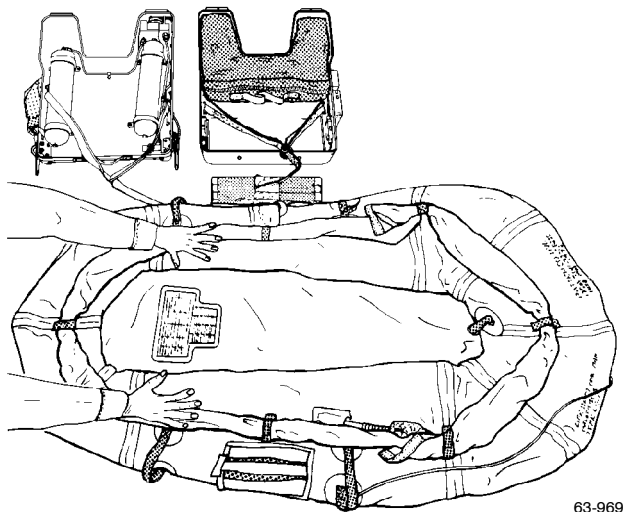
Step 11 - Para 3-24

12. Continue stowing bights in boot A until all line is stowed. Maintain 1/2-inch protrusion ([figure 3-9](#)).

NOTE

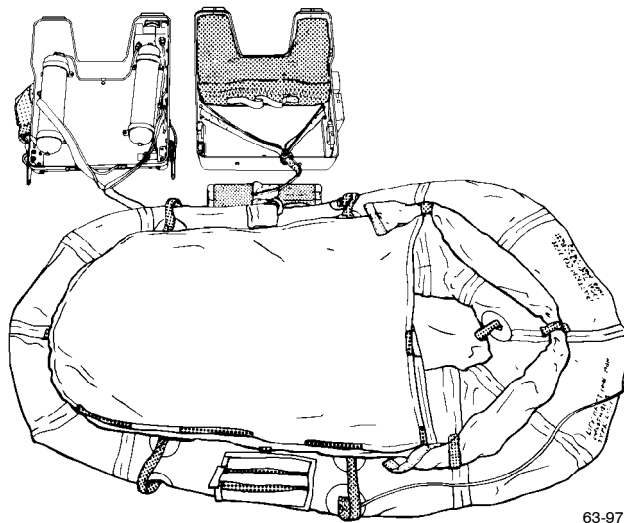
Upon the completion of [step 12](#), identification yarn shall be visible at channels 12, 14, 16, 18, and 20, and shall not show at channels 11, 13, 15, 17, and 19.

8. Flatten all areas of the raft by hand as much as possible.



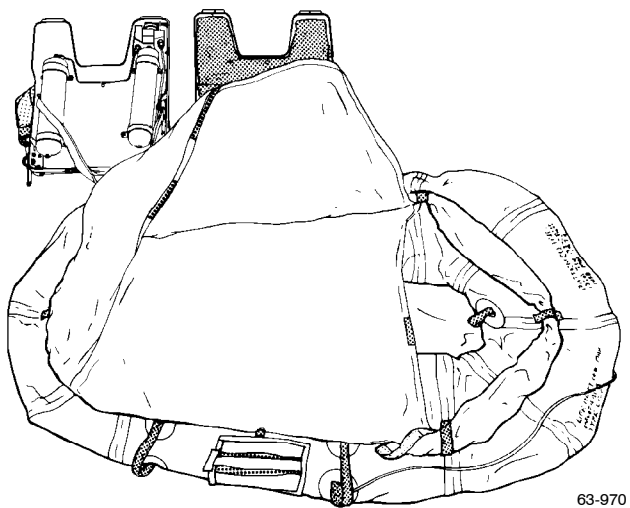
Step 8 - Para 3-25

10. Fold opposite end over onto previously folded portion. Flatten and remove wrinkles to obtain flattest condition.



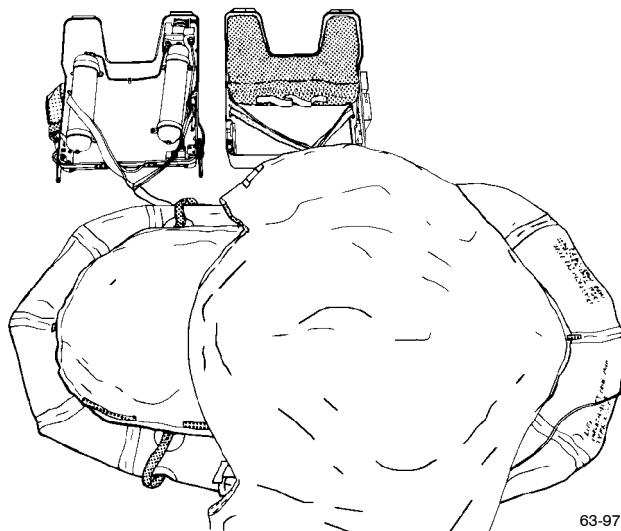
Step 10 - Para 3-25

9. Unfold weathershield on stern end of raft. Fold one end over and obtain the flattest condition possible.



Step 9 - Para 3-25

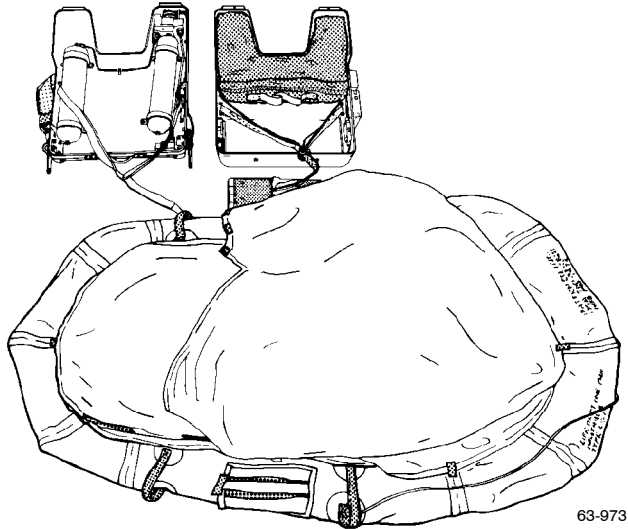
11. Unfold weathershield on bow end of raft.



Step 11 - Para 3-25

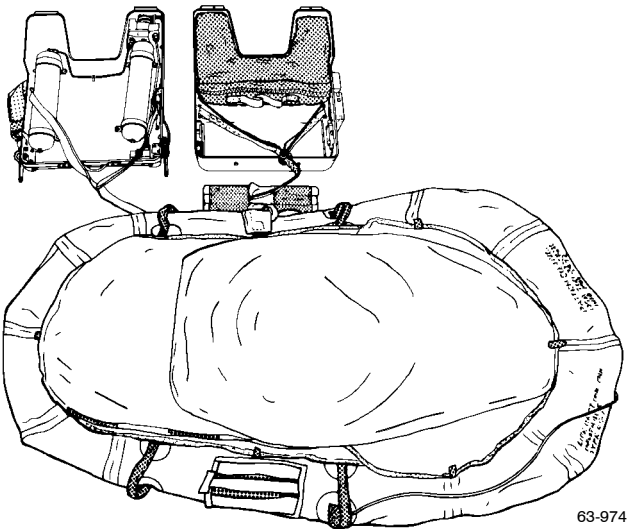
NAVAIR 13-1-6.3-2

12. Fold one side under to the approximate width of the folded portion of weathershield at the stern end of raft.



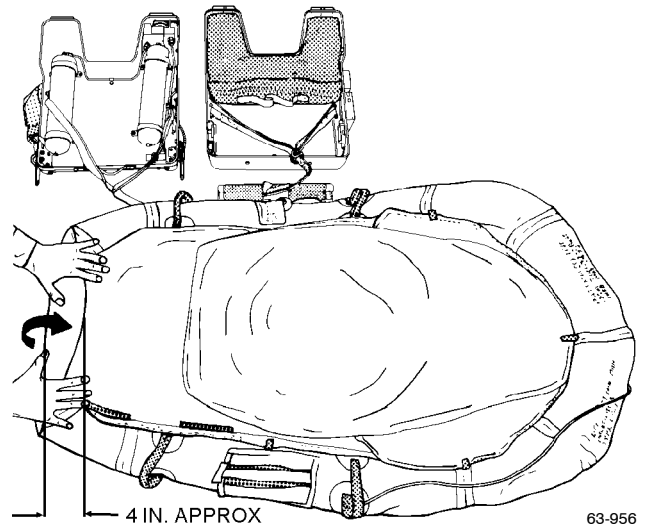
Step 12 - Para 3-25

13. Fold the opposite end under in same manner.



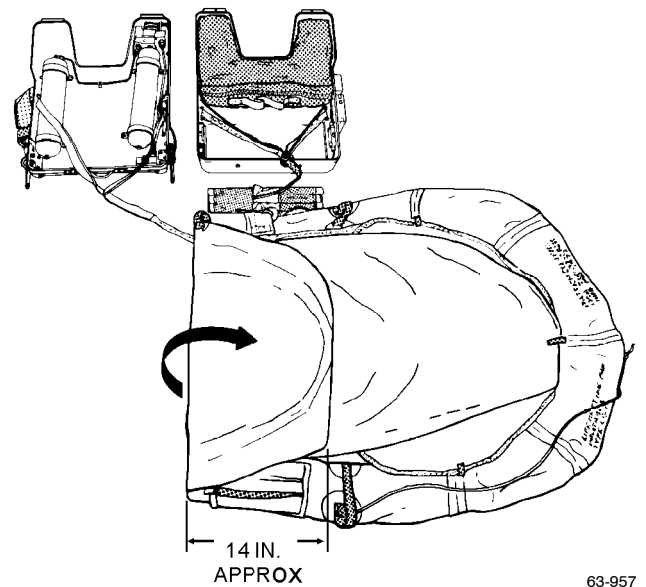
Step 13 - Para 3-25

14. Fold stern of raft over approximately 4 inches.



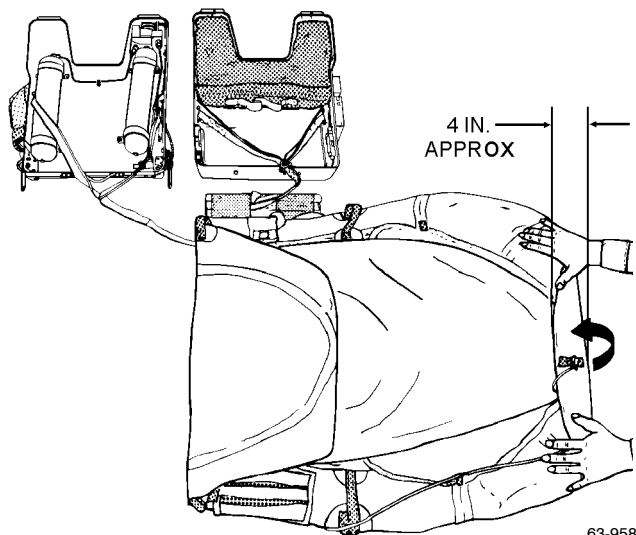
Step 14 - Para 3-25

15. Fold stern once again, making an approximate 14-inch dimension.



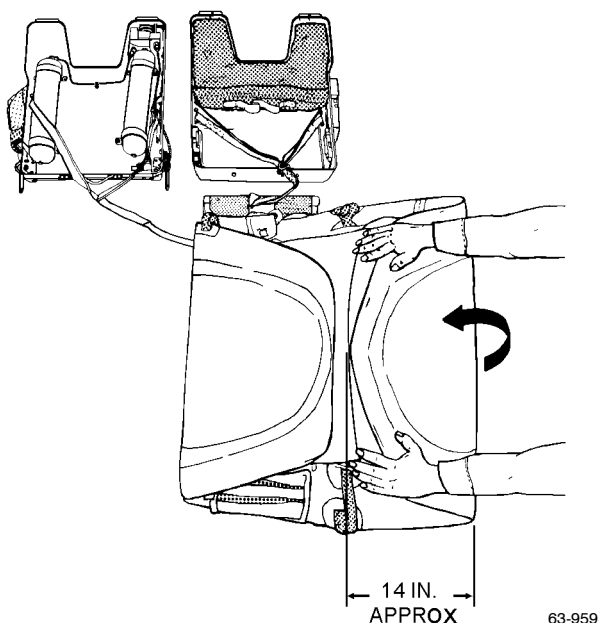
Step 15 - Para 3-25

16. Fold bow of raft over approximately 4 inches.



Step 16 - Para 3-25

17. Fold bow over again, making an approximate 14-inch dimension.

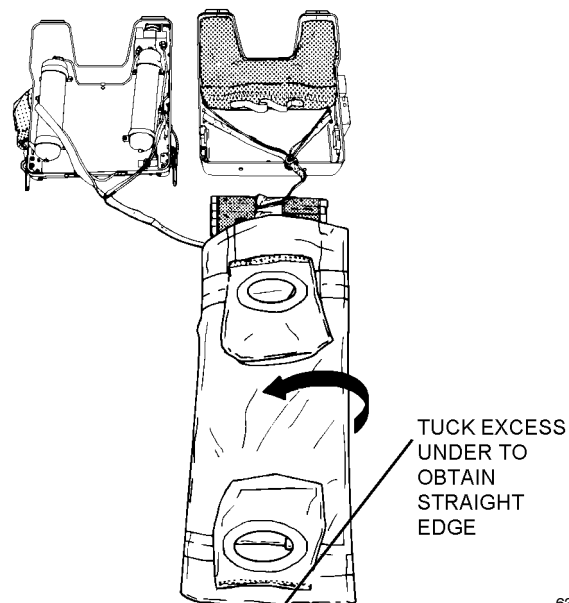


Step 17 - Para 3-25

NOTE

Width of folded raft must not exceed width of raft cover. Adjust as necessary.

18. Fold bow over stern. Tuck excess raft material under to form a straight edge. Fold and flatten ballast bags. Ensure width of folded raft is not greater than width of raft cover.



Step 18 - Para 3-25

19. Position liferaft on top of survival equipment container, ensuring ballast bags are down, with life-raft inlet valve facing up and located to the right.

WARNING

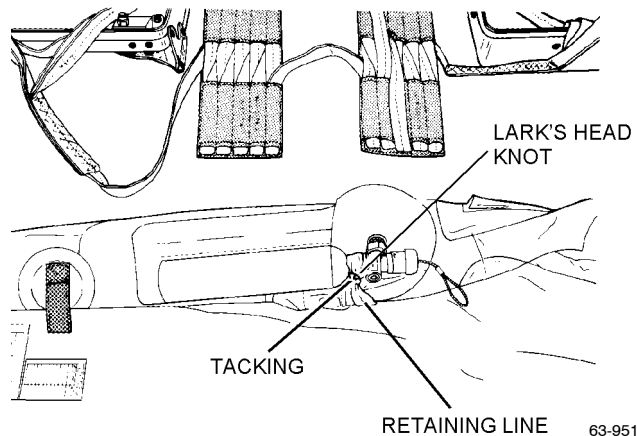
Gas under pressure. Do not loosen or attempt to remove inflation valve assembly from carbon dioxide cylinder.

NOTE

Ensure the CO₂ cylinder is in its stowage pocket and the inflation valve is disconnected from the raft. Ensure the anti-chafing disc is in position on the inlet check valve.

NAVAIR 13-1-6.3-2

20. Attach raft retaining line to cylinder with a lark's head knot. Pull knot tight and tack with two turns of waxed nylon 6-cord, single. Tie ends with surgeon's knot followed by a square knot.



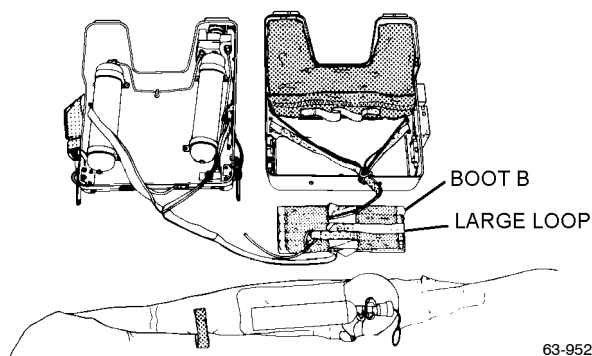
Step 20 - Para 3-25

21. Accordion fold remainder of raft retaining line and stow in raft retaining line pocket. Close pocket closure tab and secure hook and pile tape.

NOTE

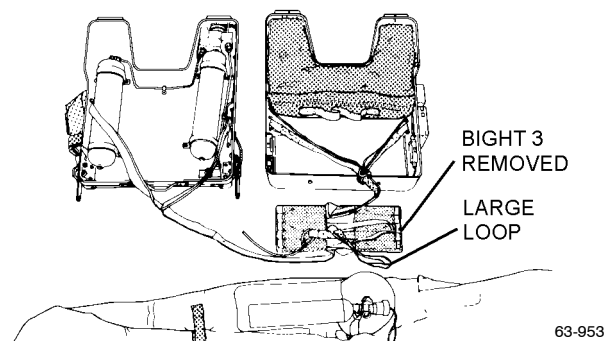
When repositioning boots, it may be necessary to move upper container. Make adjustments as necessary.

22. Position boot B on top of boot A and place boots between raft and lower container with large loop of dropline facing up and to the right.



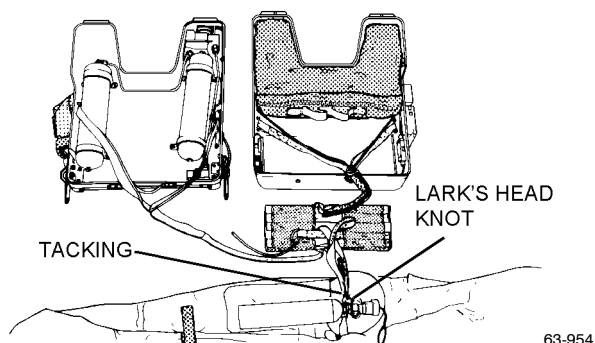
Step 22 - Para 3-25

23. Remove bight from channel 3, boot B.



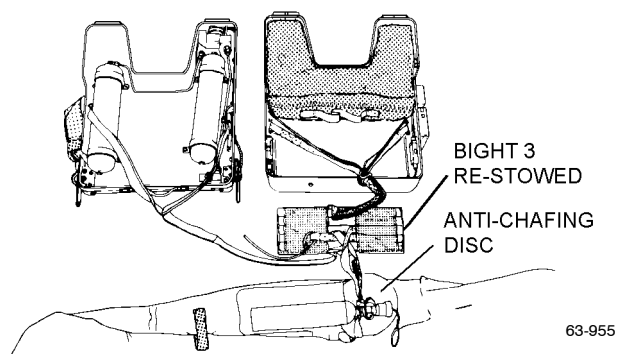
Step 23 - Para 3-25

24. Attach large loop of dropline around neck of cylinder with a lark's head knot. Pull knot tight and tack with two turns of waxed nylon 6-cord, single. Tie ends with a surgeon's knot followed by a square knot.



Step 24 - Para 3-25

25. Ensure CO₂ cylinder anti-chafing disc is installed. Attach inflation valve to liferaft inlet valve and tighten coupling nut to a torque value of 80 to 90 in-lbs. Stow bight removed from channel 3 of boot B. Bight will not extend full length of channel.

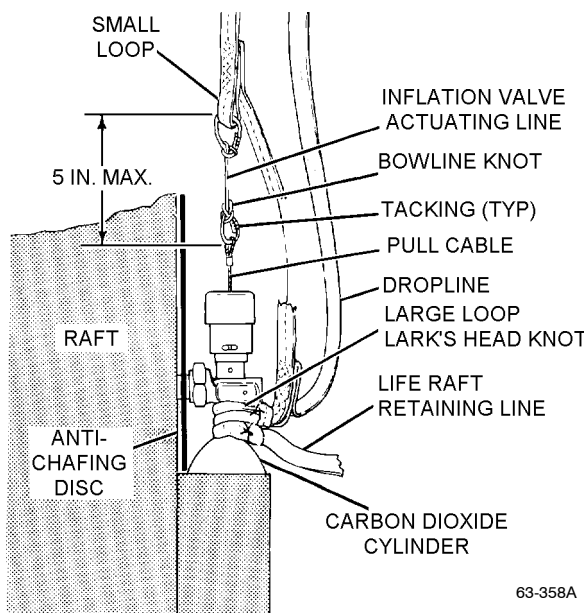


Step 25 - Para 3-25

WARNING

Final dimension of valve actuating line is critical. Finished length shall not exceed 5 inches.

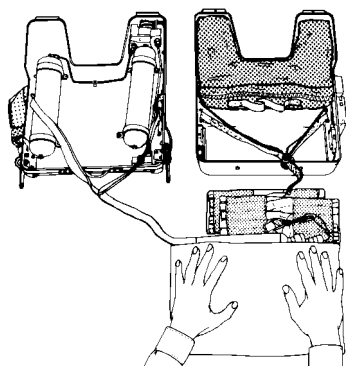
26. Pass valve actuating line through loop in end of pull cable and tie with a bowline knot. Tack with three turns of waxed size E nylon thread, single. Tie ends with surgeon's knot followed by square knot. Finished length shall not exceed 5 inches.



Step 26 - Para 3-25

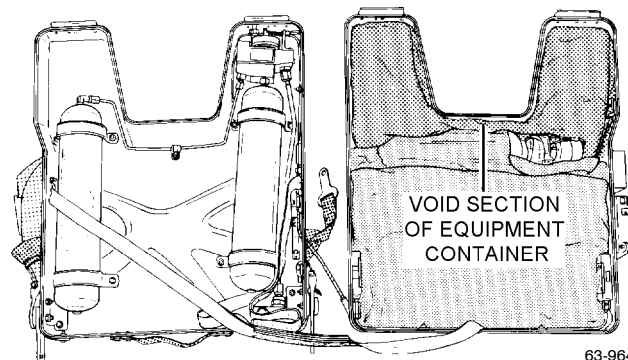
27. Ensure that the dropline and valve actuating line are not twisted or entangled.

28. Grasp liferaft and flip toward you, rotate CO₂ cylinder around to butt up against survival items. CO₂ cylinder should be positioned parallel with equipment container.



Step 28 - Para 3-25

29. Starting with the liferaft edge closest to you, fold over until even with bottom aft edge of container. Fold remainder of raft into container. The top fold and top of cylinder should be even.

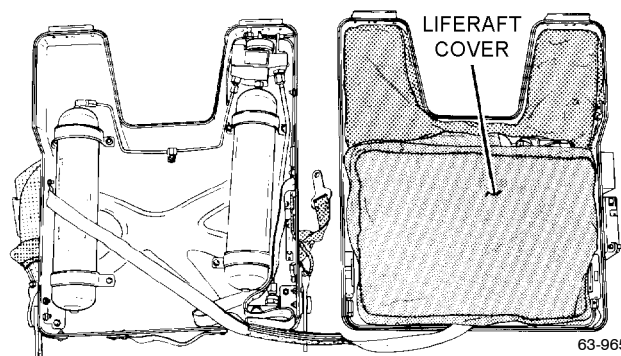


Step 29 - Para 3-25

NOTE

Some raft adjustment may be required at this point to obtain flattest condition. A liferaft packing aid may be fabricated in accordance with [paragraph 3-74](#).

30. Place cover over raft. Tuck in completely around raft. Ensure raft material does not extend beyond cover, and cover does not extend beyond edges of container.



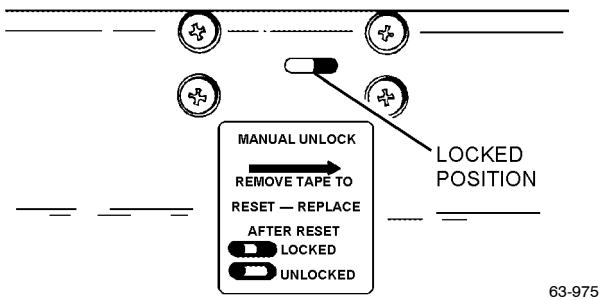
Step 30 - Para 3-25

3-26. CLOSING CONTAINER. To close the container, proceed as follows:

NOTE

Top section of dropline may be laid on top of raft cover after packing.

- 1. Insert release handle into latching mechanism before latching two sections of survival kit.
- 2. Engage hinge assemblies on lid with hinge assemblies on lower container.
- 3. Check latches for obstructions.
- 4. Press lid firmly down onto lower container.
- 5. Verify positive latching by viewing engagement of latches through inspection ports on each side of lower container and comparing with instruction label.



Step 5 - Para 3-26

- 6. Perform release handle pull test (paragraph 3-27).
- 7. Charge oxygen system in accordance with paragraph 3-40.
- 8. Remove plug (8, figure 3-27).



If reducer toggle has been twisted or forced beyond vertical (cocked) position, carefully reposition toggle. If cables/cable balls are not properly positioned, open SKU-2/A and position cables so that toggle is free to move.

- 9. Using flashlight, visually inspect position of reducer toggle (22, figure 3-29); ensure toggle is in vertical (cocked) position relative to reducer. Also, check position of cable balls (81 and 90, figure 3-27); ensure cables/cable balls are not wrapped around reducer toggle and jammed against inside of kit lid.
- 10. Reinstall plug removed in step 8.
- 11. If required, close kit in accordance with steps 1 through 6.
- 12. Ensure manual emergency oxygen handle is properly secured so that ring portion protrudes in open space between equipment cavities of survival kit and will be readily accessible even after thigh pad installation.
- 13. Attach cushion and thigh pads to upper container.
- 14. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

3-27. Release Handle Pull Test. To perform the release handle pull test, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|---------------------|------------------|
| As Required | Cord, Nylon, Type I | MIL-C-5040 |

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|-------------------------------------|---------------------|
| 1 | Dial Push/Pull Gage, 0 to 50 Pounds | DPPH50 (CAGE 11710) |

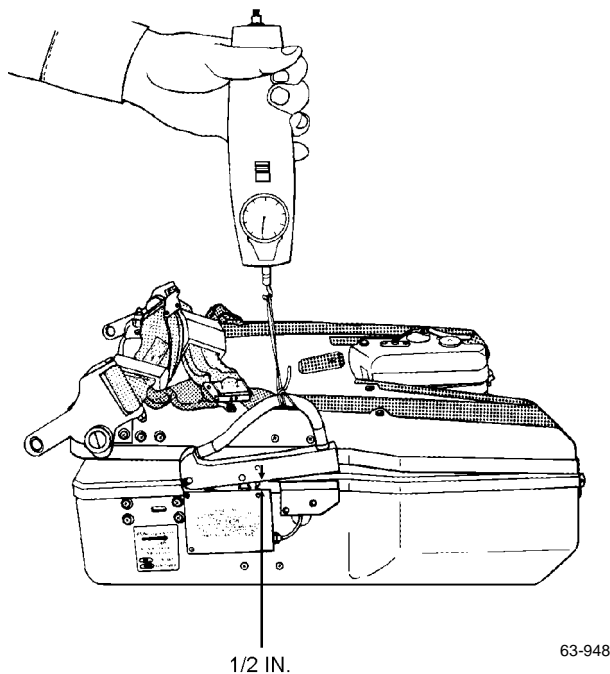
1. Attach a length of Type I nylon cord to the release handle at a point approximately 4 1/2 inches forward of the handle pivot point. Attach the hook on the DPPH50 push/pull gage to the cord.

NOTE

Do not exert downward pressure in the latch area while performing pull test. If necessary to steady kit, place hand in center of kit. Use minimum pressure.

The length of travel of the release handle must be measured while performing the pull test.

2. Apply a steady upward pull and note force required to unlock latches. Force required to unlock latches in the first 1/2 inch of travel, measured at the engagement link, shall be 10 to 30 pounds, and the handle shall pull free of the engagement link. If failure occurs refer to [table 3-7](#).



Step 2 - Para 3-27

3. Remove push/pull gage and cord from the handle.

4. Reinstall release handle in release mechanism to reset latches. Close kit.

5. Check for proper engagement of latches through inspection ports.

3-28. DELETED

Figure 3-10. Deleted
Figure 3-11. Deleted

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Section 3-4. Turnaround/Daily/Preflight/Postflight/Transfer/Special/ Conditional Inspection

3-29. GENERAL.

3-30. The Turnaround/Daily/Preflight/Postflight or Transfer Inspections consist of a visual type inspection performed in conjunction with the aircraft inspection requirements for the aircraft in which the survival kit is installed. These inspections shall be performed by line personnel (plane captain) or delegated aircrewmembers who have been instructed and found qualified by the Aviator's Equipment Branch.

3-31. The Conditional Inspection is an unscheduled inspection required as the result of a specific situation or set of conditions; e.g., hard-landing inspections or any inspection directed by higher authority that is not ordered in technical directive.

3-32. The Special (7/14 day, etc.) Inspection shall be performed on inservice survival kits installed in aircraft and in ready room issued. This inspection shall be performed at the Organizational Level of maintenance by personnel assigned to the Aviator's Equipment Branch. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

3-33. TURNAROUND/DAILY/PREFLIGHT/POST-FLIGHT/TRANSFER AND SPECIAL INSPECTION PROCEDURES. Each of these inspections consists of a visual inspection of the following:

1. Seat kit fit in ejection seat bucket.
2. Release handle for proper seating and corrosion.
3. Cushion for secure attachment, rips, tears, and loose or frayed stitching.
4. Remove left side thigh support cushion and reducer toggle access plug. Using flashlight, visually inspect position of toggle; ensure toggle is in vertical (cocked) position relative to reducer. Also, check cables/cable balls for proper routing and engagement; ensure cable balls are not jammed against lid of kit.
5. Check oxygen gauge for Full indication.
6. Replace access plug and thigh support cushion.
7. Harness assemblies for loose or frayed webbing, stitching, and cracked or broken hardware.
8. Lapbelt release assembly for loose or missing screws and corrosion.
9. Manual emergency oxygen release and cable for condition and security of attachment.
10. Automatic emergency oxygen lanyard coupling assembly for spring security. Ensure that cable coupling has not separated from cable.
11. Automatic emergency oxygen lanyard for secure attachment to personnel service disconnect block.
12. Container assembly for cracks, breaks, and other obvious damage.
13. Beacon actuator indicator for bent shaft, hair-pin cotter for elongation and corrosion, and proper mousing.
14. Secure attachment of beacon automatic actuation lanyard to aircraft deck.
15. Secure attachment of negative g-lock.
16. Condition of oxygen hose and secure attachment to kit. If repair procedure has been performed on oxygen hose assembly, check external wiring for secure attachment.

3-34. If discrepancies are found or suspected, Maintenance Control shall be notified.

3-35. Survival kits which do not pass inspection and cannot be repaired in the aircraft shall be removed in accordance with applicable aircraft manual and replaced with a Ready For Issue (RFI) survival kit. Non RFI survival kits shall be forwarded to the nearest maintenance activity having repair capability for corrective action.

Section 3-5. Acceptance/Phased/SDLM/PDM Inspection

3-36. GENERAL.

3-37. An Acceptance Inspection shall be performed on a survival kit when it is placed into service or at the time a reporting custodian accepts a newly assigned aircraft from any source, and on return of an aircraft from SDLM/PDM or other major D-level rework. The Phased/SDLM/PDM Inspection cycle of the survival kit shall be 448 days for the F-14 aircraft and 364 days for the EA-6B aircraft. In no case, however, shall the phased interval exceed 448 days for the F-14 aircraft and 364 days for the EA-6B. The battery test inspection cycle for the AN/URT-33A Radio Beacon is dependent upon the type of the battery installed. Refer to NAVAIR 16-30URT33-1 for battery test inspection cycles and requirements. For acceptance inspection purposes, verification of pyrotechnics and configuration is accomplished by visual record examination only. Disassembly beyond the daily inspection requirements of applicable publications is not required. Activities may elect to increase the depth of inspection if equipment condition, visual external inspection, or record examination indicates such action is warranted.

3-38. VISUAL INSPECTION. This inspection shall be performed prior to the functional check of the kit. Visually check kit for the following:

- 1. Cushion for rips, tears, loose or frayed stitching, and general condition.
- 2. Surface unclean, rough, misaligned, or container cracks, nicks, or other flaws.
- 3. Condition and security of hook and pile tape.
- 4. Release handle for wear, corrosion, and damage.
- 5. Webbing for cuts, loose or frayed stitching, and security of attachment.
- 6. Lapbelt release assembly for loose or missing screws and corrosion.
- 7. Hoses for cracks and deterioration.
- 8. Material imperfections, foreign matter embedded, burrs or sharp edges inside and outside kit, or other faulty workmanship.
- 9. Any component loose or otherwise not securely retained.

- 10. Any functioning part that operates with difficulty.
- 11. Evidence of oil preservatives or hydrocarbon materials on emergency oxygen system components or hoses.
- 12. Markings (missing, insufficient, incorrect, illegible, not permanent).
- 13. Cable assemblies for rust or corrosion.
- 14. Swaged balls on cable assemblies for security of attachment.
- 15. Negative g-lock striker fitting for secure attachment.
- 16. Lubricant on upper container lid lock hook surfaces.

3-39. FUNCTIONAL CHECK. The functional check shall be performed any time a kit is placed in service, after any adjustment procedures, or when equipment condition, visual external inspection, or record examination indicates such action is warranted to determine the condition of the kit. To perform a functional check, proceed as follows:

| Materials Required | | |
|----------------------------|-----------------------------------|---|
| Quantity | Description | Reference Number |
| As Required | Leak Detection Compound, Type I | MIL-L-25567 |
| As Required | Lint-free Cloth | MIL-C-85043 NIIN-00-044-9281 |
| Support Equipment Required | | |
| Quantity | Description | Reference Number |
| 1 | Test Stand | 59A120 (CAGE 02551) or 31TB1995-1 (CAGE 99251) |
| 1 | Dial, Push/Pull Gage, 0-50 Pounds | DPP-50 (CAGE 11710) |
| 1 | Toggle Reset Tool | Fabricate IAW Figure 3-70 |

CAUTION

Discontinue functional test if seat kit fails to pass any steps of test procedures. Repair malfunction before continuing procedures or damage to seat kit may result. After repair, the entire test procedure shall be performed.

NOTE

Performance of test stand is dependent upon skill of operator. It is imperative that operator be thoroughly familiar with instruments, controls, and connections that comprise systems incorporated in test stand. See NAVAIR 17-15BC-20 and NAVAIR 13-1-6.4-4 to familiarize yourself with 59A120 or 31TB1995 series liquid oxygen converter test stands.

Emergency oxygen cylinder pressures used in this functional test were derived under ideal shop conditions of 70°F (21°C). Variances in ambient air temperatures directly affect charging pressures. Refer to [table 3-6](#) for details.

Ensure that emergency oxygen cylinder is filled to 1800 to 2000 psi.

1. Remove bell jar and connect oxygen outlet hose of kit to fitting (C-1) and ensure that valve (V-2) is open and all other test stand valves are closed ([figure 3-12](#)).

2. Attach push/pull gage to manual emergency oxygen release handle.

3. Measure force required to disengage manual oxygen release. Force required shall be 10 to 30 pounds and emergency oxygen system shall actuate and indicate 45 to 80 psi on test stand gage (PG-1).

4. Reset reducer assembly.

5. Turn on oxygen supply cylinder to test stand.

6. Slowly open valve (V-6) on test stand and adjust pressure on gage (PG-1) to 90 psi.

7. Measure the force required to disengage the manual oxygen release with a push/pull gage. Force required shall be 10 to 30 pounds.

NOTE

Any degree of leakage in the oxygen system requires corrective maintenance.

WARNING

Before use, inspect leak detection compound. Compound which is not clear and free from suspended material/sediment is considered contaminated and shall be disposed of. Compound exhibiting peculiar odors, such as acetone or alcohol, is considered contaminated and shall be disposed of.

8. Use leak detection compound to check all pressure lines and fittings on survival kit to ensure no leakage.

9. Reset reducer assembly.

CAUTION

Do not increase pressure above 150 psi.

10. Using valve (V-6) increase pressure until relief valve unseats.

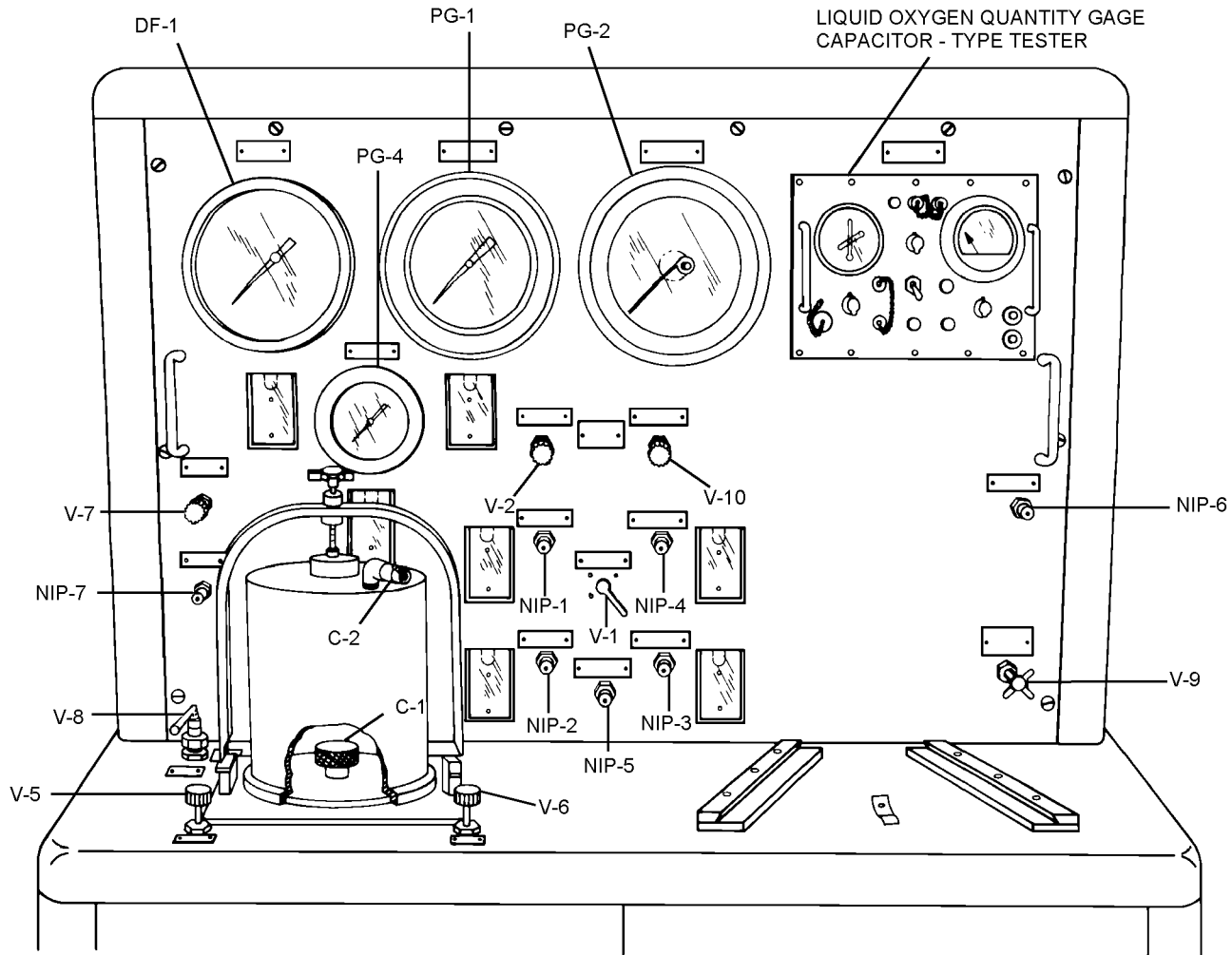
NOTE

Unseating can be determined by listening and observing gage (PG-1) on test stand.

11. Repeat [step 10](#) several times to establish a correct pressure. Relief valve shall unseat at 120 to 140 psi when pressure is increased, and reseal at 110 psi minimum when pressure is decreased. Once resealed, relief valve shall be leak tight, (no indication on PG-1 of pressure drop).

NOTE

Pressure may be reduced below opening pressure of the relief valve by closing valve (V-6) and opening valve (V-5).



| | | | |
|-------|--|------|--|
| C-1 | BELL JAR BOTTOM COUPLING | PG-2 | FLOWMETER INDICATOR GAGE |
| C-2 | BELL JAR TOP COUPLING | PG-4 | 0 - 15 PSIG LOW PRESSURE TEST GAGE |
| DF-1 | 0 - 100" H ₂ O DIFFERENTIAL PRESSURE GAGE | V-1 | FLOWMETER SELECTOR GAGE |
| NIP-1 | 0 - 0.25 LPM FLOWMETER CONNECTION | V-2 | TEST PRESSURE GAGE TO BELL JAR VALVE |
| NIP-2 | 0 - 1 LPM FLOWMETER CONNECTION | V-5 | SYSTEM BLEED VALVE |
| NIP-3 | 0 - 50 LPM FLOWMETER CONNECTION | V-6 | OXYGEN SUPPLY VALVE |
| NIP-4 | 0 - 150 LPM FLOWMETER CONNECTION | V-7 | DIFFERENTIAL PRESSURE BLEED VALVE |
| NIP-5 | CONVERTER SUPPLY OUTLET CONNECTION | V-8 | DIFFERENTIAL PRESSURE SHUT-OFF VALVE |
| NIP-6 | SUPPLY TO CONVERTER CONNECTION | V-9 | CONVERTER SUPPLY FLOW CONTROL VALVE |
| NIP-7 | DIFFERENTIAL PRESSURE GAGE CONNECTION | V-10 | TEST PRESSURE GAGE BUILD-UP AND FLOW VALVE |
| PG-1 | 0 - 160 PSIG TEST PRESSURE GAGE | | |

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Figure 3-12. Test Stand Model 59A120

12. Close valve (V-6) and bleed oxygen pressure from system by opening valve (V-5). All pressure is bled when gages (PG-1) and (PG-4) indicate zero pressure.

13. Close valve (V-5).

14. Ensure valve (V-2) is opened and all other test stand valves are closed.

15. Measure force required to disengage automatic oxygen release with a push/pull gage. Force required shall be 10 to 30 pounds and emergency oxygen system shall actuate and indicate 45 to 80 psi on gage (PG-1) on test stand. Reset reducer assembly.

16. Open valve (V-5), and ensure that all other test stand valves are closed.

17. Actuate toggle on reducer to ensure positive flow through valve (V-5). Reset reducer assembly.

18. Open valve (V-8).

19. Slowly close valve (V-5) while observing gage (DF-1).

NOTE

Observe gage (DF-1) for two minutes to ensure no leakage. Any pressure rise indicates leakage in the reducer valve seat and requires corrective maintenance.

20. Close valve (V-8), open valve (V-5), and disconnect oxygen outlet hose from fitting (C-1).

21. Ensure all valves on the test stand are secured.

22. Connect oxygen outlet hose to fitting (NIP-6). Ensure that valve (V-10) is open and all other test stand valves are closed.

23. Connect test stand hose to fitting (NIP-5) and fitting (NIP-4).

24. Move valve (V-1) to the NIP-4 position.

25. Ensure that 1800 to 2000 psi is in the oxygen cylinder of the kit.

26. Pull manual oxygen release. Oxygen pressure on gage (PG-1) shall indicate 45 to 80 psi.

27. Slowly open valve (V-9) to indicate 90 LPM on gage (PG-2). Oxygen pressure shall indicate 45 to 80 psi on gage (PG-1).

NOTE

When needle of cylinder pressure gage is between the E and F of REFILL, pressure is approximately 250 psi.

28. Observe emergency oxygen cylinder pressure gage and allow the system to decrease to 250 psi while maintaining 90 LPM flow and 45 to 80 psi pressure.

29. Close valve (V-9).

30. With zero flow indicated on gage (PG-2), pressure indicated on gage (PG-1) shall be 45 to 80 psi.

31. Reset reducer assembly.

32. Bleed oxygen pressure from system by opening valve (V-5) and (V-2). All pressure is bled when gages (PG-1) and (PG-4) indicate zero pressure.

33. Disconnect kit from test stand.

34. Secure test stand.

35. All areas where leak detection compound was applied shall be wiped thoroughly clean. Dry with lint-free cloth, filtered low pressure compressed air, or low pressure nitrogen.

36. Recharge emergency oxygen cylinder to 1800 to 2000 psi. Refer to [paragraph 3-40](#) for charging procedures.

3-40. PURGING AND CHARGING EMERGENCY OXYGEN SYSTEM. To purge and charge the emergency oxygen system proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|------------------------------------|------------------|
| As Required | Leak Detection Compound, Type I | MIL-L-25567 |
| As Required | Nitrogen, Type I, Class 1, Grade B | BB-N-411 |
| As Required | Aviator's Breathing Oxygen, Type I | MIL-O-27210 |

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|-----------------------------------|--|
| 1 | Oxygen Purging Electric Heater | C5378 (CAGE 96787) or equivalent |
| 1 | Shut-off Valve | — |
| 1 | Pressure Regulator | — |
| 1 | Adapter, Filling (Optional) | 21000-T130-1 (CAGE 53655) |

WARNING

Servicing of emergency oxygen system is accomplished only after removal of survival kit from aircraft.

Before use, inspect leak detection compound. Compound which is not clear and free from suspended material/sediment is considered contaminated and shall be disposed of. Compound exhibiting peculiar odors, such as acetone or alcohol, is considered contaminated and shall be disposed of.

1. If survival kit assembly has not been removed from aircraft, remove in accordance with applicable maintenance manual.

3-34 Change 2

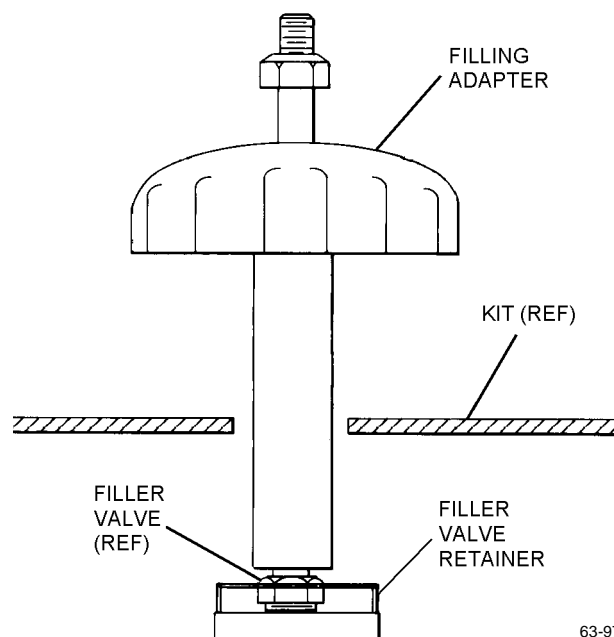
WARNING

If necessary to release pressure in oxygen system before purging/filling, pull emergency oxygen lanyard. This releases pressure through pressure reducer. DO NOT release pressure through filler valve or adapter. Releasing high-pressure oxygen through restriction of filler valve causes heat. Fire or explosion may result.

NOTE

Use of filling adapter on SKU-2/A survival kits is optional.

2. Remove oxygen filler valve cap and connect filling adapter to filler valve.



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Step 2 - Para 3-40

NOTE

If emergency oxygen system is contaminated or system has remained empty for more than 2 hours, purging is required. If emergency oxygen system does not warrant purging process, proceed to [step 10](#) for charging sequence.

3. Deplete emergency oxygen system if necessary.
4. Connect nitrogen source to filling adapter/filler valve, and close pressure reducer.

NOTE

If relief valve on Oxygen Purging Electric Heater will not allow 100 psi, raise pressure only to allowable limit.

5. Slowly pressurize to 100 psi with nitrogen at temperature of 110 to 130 degrees C (230 to 266 degrees F) using electric heater.

6. Turn off nitrogen source and deplete oxygen system.

7. Repeat [steps 5](#) and [6](#), twice.

8. With pressure reducer open, turn on nitrogen source and purge for 10 minutes at temperature of 110 to 130 degrees C (230 to 266 degrees F).

9. Turn off nitrogen source and disconnect.

10. Connect oxygen source to filling adapter/filler valve with suitable pressure regulator and shut-off valve.

WARNING

When resetting reducer toggle ensure toggle is in the vertical (cocked) position and ensure cables and cable balls are not wrapped around reducer toggle and jammed against the inside of the kit lid.

11. Reset pressure reducer toggle and ensure toggle is in the vertical (cocked) position and cables

and cable balls are not wrapped around reducer toggle and jammed against the inside of the kit lid.

12. Slowly pressurize to 100 psi.

13. Deplete cylinder to 50 psi.

WARNING

Observe filling stages as rapid application of oxygen pressure creates heat which may result in fire or explosion. Allow no less than 3 minutes for each filling stage and 2 minute intervals for cooling between stages.

NOTE

If kit is to be stored, the emergency oxygen bottle shall be depleted or filled to 200 PSI (when needle on gage bisects E of REFILL). For shipping, fill or deplete to 25 PSI using the gage on the oxygen refill cylinder.

14. Charge emergency oxygen system in stages in accordance with [table 3-5](#) until pressure gage indicates correct pressure for existing ambient temperature ([table 3-6](#)).

Table 3-5. Charging Stages

| Stage | PSI |
|-------|------|
| 1 | 500 |
| 2 | 1000 |
| 3 | 1500 |
| 4 | 1800 |
| 5 | 2000 |

Table 3-6. Ambient Air Temperature Vs Charging Pressures

| Ambient Air Temperature | | Charging Pressure |
|-------------------------|-----|-------------------|
| °F | °C | PSI |
| 0 | -18 | 1550-1750 |
| 10 | -12 | 1600-1775 |
| 20 | -7 | 1625-1800 |
| 30 | -1 | 1675-1850 |
| 40 | 5 | 1700-1875 |
| 50 | 10 | 1725-1925 |
| 60 | 16 | 1775-1975 |
| 70 | 21 | 1800-2000 |
| 80 | 27 | 1825-2050 |
| 90 | 32 | 1875-2075 |
| 100 | 38 | 1900-2125 |
| 110 | 43 | 1925-2150 |
| 120 | 49 | 1975-2200 |
| 130 | 54 | 2000-2225 |

15. Loosen filling adapter (if installed) until all pressure is bled from high-pressure line. Remove filling adapter.

18. If the seat survival kit assembly was removed from the aircraft in [step 1](#), reinstall using the applicable aircraft maintenance manual.

Section 3-6. Maintenance

3-41. GENERAL.

WARNING

Keep working area clean and free of oil, grease and dirt. Do not attempt to perform any component removal with the oxygen system pressurized.

3-36 Change 3

WARNING

Compound which is not clear and free from suspended material/sediment is considered contaminated and shall be disposed of. Also compound exhibiting peculiar odors such as acetone or alcohol is considered contaminated and shall be disposed of.

NOTE

Alternate Fill Valve P/N 9120097-27 is coreless and has a maximum leakage rate of 1 cc/hr. This will be evident by very tiny bubbles passing through the top of the valve when leak detection compound is applied level to top rim. No leaks around threads are acceptable. If large bubbles are evident, contact survival kit FST for disposition.

16. Examine leak detection compound then apply around connection points of oxygen gage, reducer, and filler valve. Check for leaks. Then thoroughly wipe clean and dry with lint-free cloth, filtered low-pressure compressed air, or low pressure oxygen.

17. Reinstall oxygen filler valve cap on filler valve.

18. If the seat survival kit assembly was removed from the aircraft in [step 1](#), reinstall using the applicable aircraft maintenance manual.

3-42. This section contains procedures for troubleshooting, disassembly, cleaning, inspection of disassembled parts, repair or replacement of parts, assembly, and adjustment. Work shall be performed in a clean, dust and grease-free area.

NOTE

Disassembly shall be only to extent necessary to perform required task.

3-43. TROUBLESHOOTING.

3-44. Where troubles or operating malfunctions are encountered, locate probable cause and remedy using [table 3-7](#).

3-45. DISASSEMBLY OF SKU-2/A SEAT SURVIVAL KIT.

| Support Equipment Required | | |
|----------------------------|----------------|------------------|
| Quantity | Description | Reference Number |
| 1 | Spanner Wrench | — |
| 1 | Arbor Press | — |

3-46. Disassemble kit using index numbers assigned to [figures 3-25 through 3-33](#) as a reference. Disassembly shall be only to the extent necessary to perform maintenance task.

NOTE

Discard all O-rings, seals, cotter pins, and Teflon sealing tape removed from oxygen connections during disassembly. Discard any threaded inserts, rivets, rubber pads, seals, molding, or hook and pile fastener tape removed during disassembly of kit.

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Table 3-7. Troubleshooting

| Trouble | Probable Cause | Remedy |
|---|--|---|
| Low or zero indication on pressure gage. | System empty. | Charge system in accordance with paragraph 3-40 . |
| | Defective gage. | Replace gage. |
| | Leaking components. | Tighten connections or replace. |
| Relief Valve Leakage. | Defective valve. | Replace Relief Valve, P/N P103-673. |
| Relief Valve does not operate within tolerance of 120 to 140 psi when simulated aircraft back pressure is applied during functional test. | Defective or out of adjustment relief valve. | Adjust to meet required specifications (paragraph 3-67). If unable to adjust, replace relief valve. |
| Pull force to actuate emergency oxygen system is not within tolerance of 10 to 30 pounds. | Cable broken. | Replace cable. |
| | Crushed cable/conduit assemblies. | Replace cable/conduit assembly. |
| Emergency oxygen does not actuate when manual release is pulled. | Crushed cable/conduit assembly. | Replace cable/conduit assembly. |
| | Reducer toggle forced beyond vertical (cocked) position, canted or turned. | Reposition toggle. |
| | Cable balls may be wrapped around reducer toggle and jammed against inside of kit lid. | Inspect manual cable assembly and reposition. |
| | | Inspect and adjust the automatic emergency oxygen release in accordance with paragraph 3-66 . |
| Emergency oxygen does not actuate when automatic release is pulled. | Cable balls may be wrapped around reducer toggle and jammed against inside of kit lid. | Inspect and adjust the automatic emergency oxygen release in accordance with paragraph 3-66 . |
| | Automatic actuation cable out of adjustment. | |
| | Reducer toggle forced beyond vertical (cocked) position, canted, or turned. | Reposition toggle and adjust the automatic emergency oxygen release in accordance with paragraph 3-66 . |
| Emergency lanyard coupling assembly loose. | Broken or missing spring. | Replace spring. |
| Loss of aircraft communications. | Broken or misaligned pins and sockets in hose connectors. Open or short circuit in oxygen hose wiring. | Perform electrical check in accordance with NAVAIR 13-1-6.3-1. |
| Kit lid locks fail to release simultaneously. | Lid locks out of adjustment. | Adjust locks in accordance with paragraph 3-65 . |

Table 3-7. Troubleshooting (Cont)

| Trouble | Probable Cause | Remedy |
|---|--|--|
| Pull force to actuate kit release mechanism is not within tolerance of 10 to 30 pounds. | Obstructions between upper and lower container mating surfaces. | Remove obstruction. |
| | Improper folding of liferaft assembly. | Refold liferaft assembly. |
| No oxygen output pressure with pressure reducer actuated. | Weak or broken spring (27, figure 3-29) in pressure reducer. | Bleed system; disassemble in accordance with paragraph 3-47 and replace spring. |
| | Pressure reducer out of adjustment. | Adjust pressure reducer in accordance with paragraph 3-64 . |
| | Defective oxygen gage. | Bleed system; replace oxygen gage. |
| | Foreign matter in output flow path. | Bleed system; disassemble in accordance with paragraph 3-47 and clean. |
| | Poppet (17, figure 3-29) does not extend into position. | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet and seat. |
| Oxygen system output pressure not within 45 to 80 psig limits. | Pressure reducer out of adjustment | Adjust pressure reducer in accordance with paragraph 3-64 . |
| | Weak or broken poppet spring (16, figure 3-29) in pressure reducer. | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet spring. |
| | Defective pressure reducer. | Replace reducer. |
| Pulsating pressure at outlet port. | Bent plunger (28, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace plunger. |
| Oxygen system leaking; low pressure side of reducer. | Defective O-ring (31, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace O-ring. |
| | Weak or broken spring (16, figure 3-29) in pressure reducer. | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet spring. |
| Pressure reducer will not shut off. | Bent poppet (17, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet. |
| | Broken poppet spring (16, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet spring. |
| | Dirt. | Bleed system; disassemble in accordance with paragraph 3-47 and clean |

Table 3-7. Troubleshooting (Cont)

| Trouble | Probable Cause | Remedy |
|---|---|--|
| Pressure reducer will not shut off. (cont) | Misaligned seat (20, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace seat. |
| | Defective retaining ring (13, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace retaining ring. |
| Pressure reducer does not meet required flows. | Pressure reducer out of adjustment. | Adjust pressure reducer in accordance with paragraph 3-64 . |
| | Weak or broken poppet spring (16, figure 3-29) in pressure reducer. | Bleed system; disassemble in accordance with paragraph 3-47 and replace spring. |
| | Improper assembly of pressure reducer. | Bleed system; disassemble in accordance with paragraph 3-47 and clean. |
| | Dirty filter assembly (14, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace filter assembly. |
| Oxygen system leaking; high pressure side of reducer. | Misaligned seat (20, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace seat. |
| | Bent poppet (17, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet. |
| | Broken poppet spring (16, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace poppet spring. |
| | Inverted backup ring (19, figure 3-29). | Bleed system; disassemble in accordance with paragraph 3-47 and replace backup ring. |

3-47. DISASSEMBLY OF PRESSURE REDUCER ASSEMBLY. The four major areas of disassembly in the pressure reducer assembly (figure 3-13) are (1) removal of oxygen gage, filler valve, plug, and adapter; (2) removal and disassembly of adjustment assembly; (3) disassembly of high pressure assembly; and (4) disassembly of low pressure assembly. Determine area of malfunction using table 3-7, Troubleshooting, and disassemble only to the extent necessary for corrective maintenance.

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|---|---|
| 1 | Pressure Reducer Tool Set (figure 3-14) | T216D900-1 (CAGE 30941) NIIN 01-100-8928 |
| 1 | Vise | — |
| 1 | Retaining Ring Pliers | S0100 (CAGE 79136) |
| 1 | Retaining Ring Pliers | SL0100 (CAGE 79136) |
| 1 | Toggle Reset | Fabricate IAW paragraph 3-70 |
| 1 | Hex Key, 5/32-Inch | — |

WARNING

Do not use oil or any material containing oil in conjunction with oxygen equipment. Oil, even in a minute quantity, coming in contact with oxygen can cause explosion or fire. Dust, lint, and fine metal particles are also dangerous.

NOTE

Maintenance personnel are advised to read and thoroughly understand the procedure in each step prior to attempting the step.

1. Remove oxygen gage, filler valve and adapter as follows:

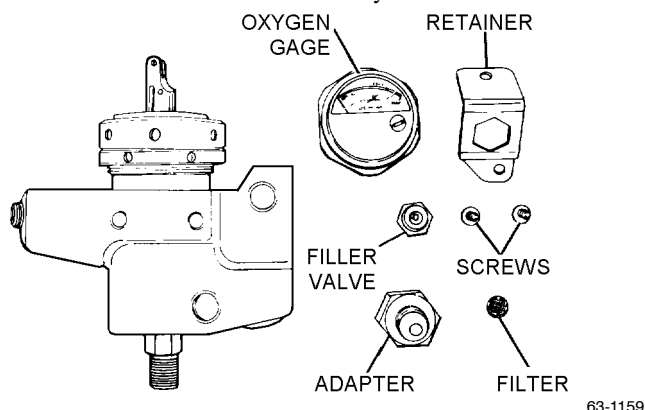
a. Remove oxygen gage.

b. Remove adapter and discard O-ring.

c. Remove two attaching screws and remove filler valve retainer and anti-rotation bracket.

d. Remove filler valve assembly.

e. Remove filter assembly.



Step 1e - Para 3-47

f. Remove plug, using a 5/32-inch hex key.

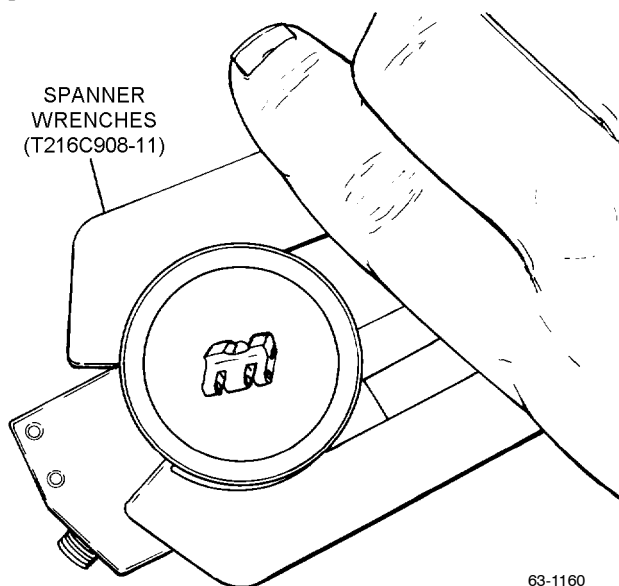
CAUTION

Filter must not be installed when using alternate Fill Valve P/N 9120097-27.

g. Replace worn or defective parts as necessary.

2. Remove and disassemble adjustment assembly as follows:

a. Position oxygen pressure reducer assembly with cap adjustment side up. Loosen lock ring, using spanner wrench (T216C908-11) in a clockwise rotation while holding the adjusting cap with the second spanner wrench.



Step 2a - Para 3-47

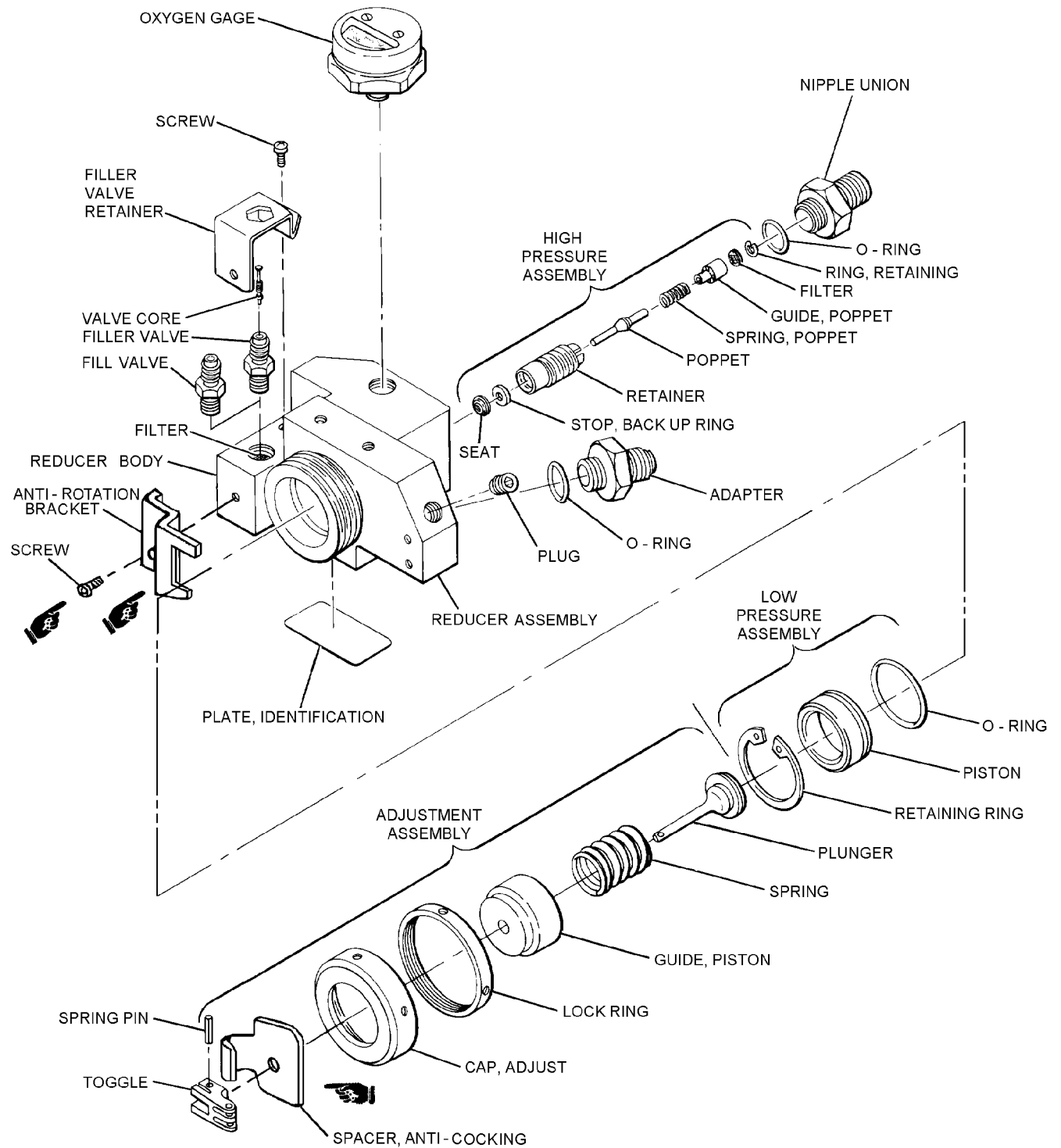
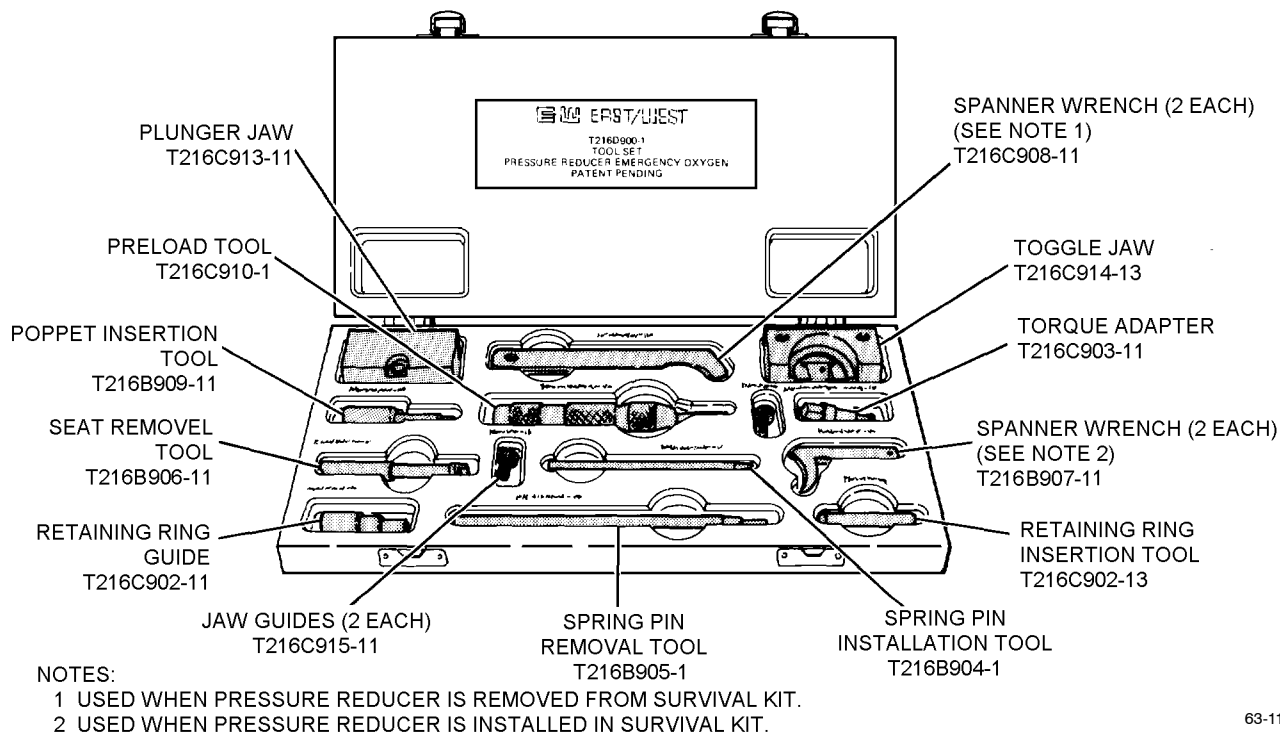


Figure 3-13. SKU-2/A Reducer Assembly

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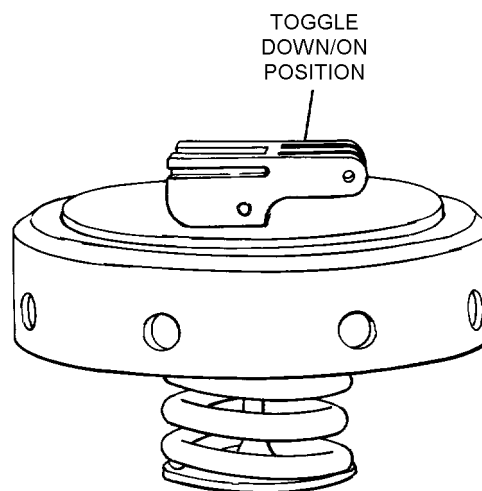


63-1157

Figure 3-14. Emergency Oxygen Pressure Reducer Tool Set

NOTE

To permit hand removal of the adjustment assembly ensure that toggle is in upright (OFF) position. To obtain desired position, insert toggle reset tool in slot on either side of toggle and twist. ACC 486 has replaced the spacer with an anti-cocking spacer.



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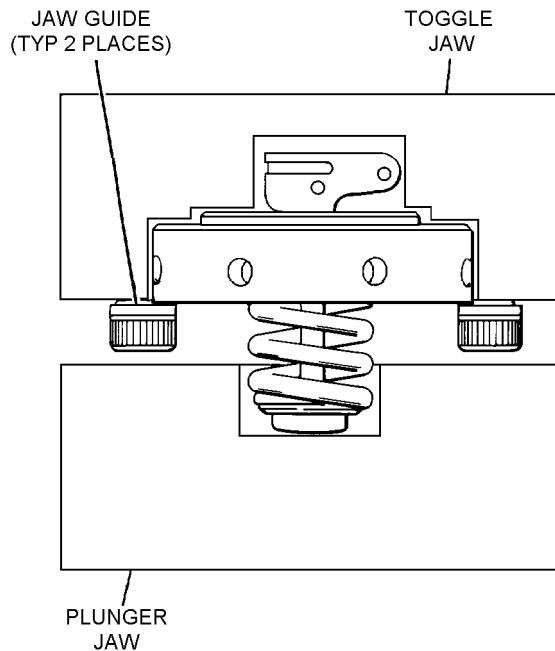
b. Remove adjustment assembly from pressure reducer by rotating in a counterclockwise direction.

c. Using toggle reset tool, trip/rotate toggle to down (ON) position to reduce tension on toggle and plunger spring assembly.

Step 2c - Para 3-47

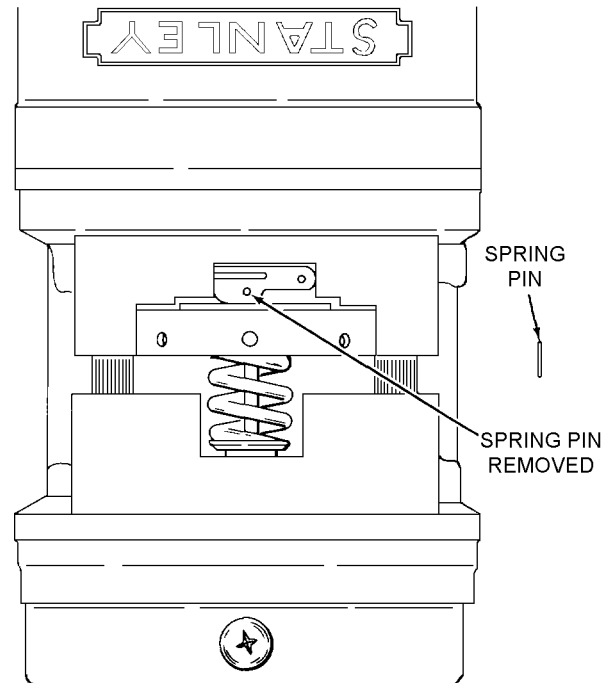
d. Using appropriate Allen key, screw jaw guides into the two threaded holes in the toggle jaw.

e. Position adjustment assembly in the toggle and plunger jaws.



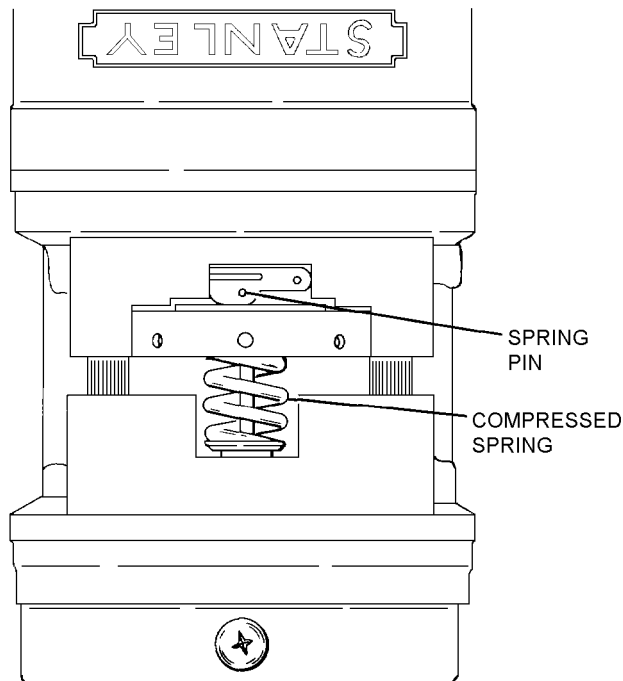
Step 2e - Para 3-47

g. Using spring pin removal tool, punch out spring pin and discard.



Step 2g - Para 3-47

f. Place toggle and plunger jaws in a vise. Align fixture and tighten to compress spring and relieve tension on the spring pin and toggle attachment.

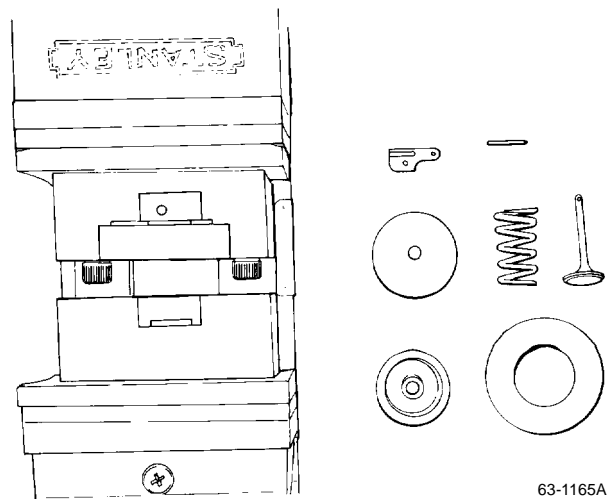


Step 2f - Para 3-47

NOTE

Spring pin is the only attachment point of components.

h. Loosen vise jaws to relieve pressure. Remove adjustment assembly from toggle and plunger jaws and disassemble. Replace worn or defective parts as necessary.



Step 2h - Para 3-47

NAVAIR 13-1-6.3-2

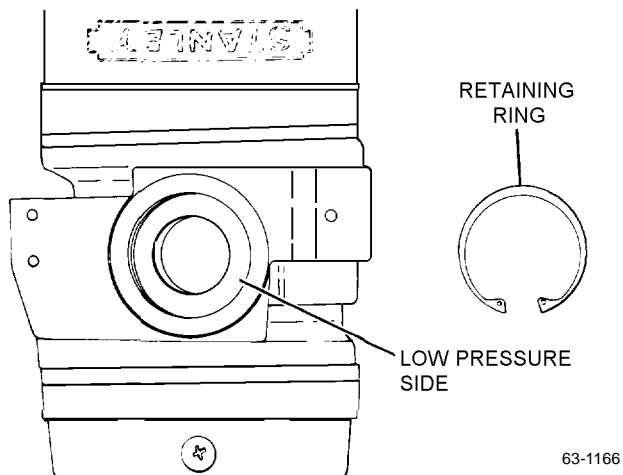
3. Disassemble low pressure assembly as follows:

a. Position oxygen pressure assembly with adjustment side or low pressure side up and secure.

NOTE

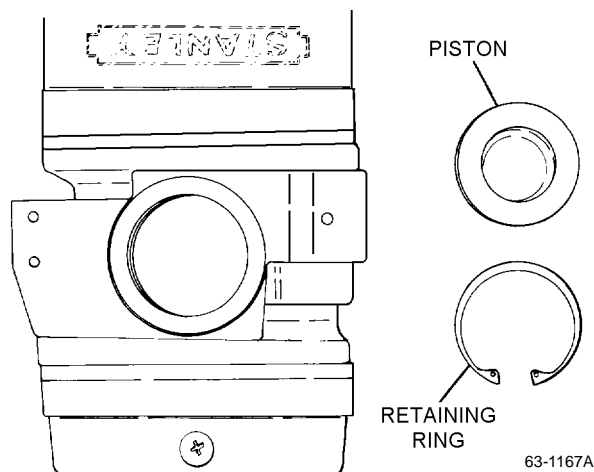
If adjustment assembly has not been removed, remove in accordance with [step 2](#).

b. Remove retaining ring, using retaining ring pliers (SL0100) or equivalent.



Step 3b - Para 3-47

c. Remove piston from reducer body bore, using retaining ring pliers with points pressed against piston skirt.



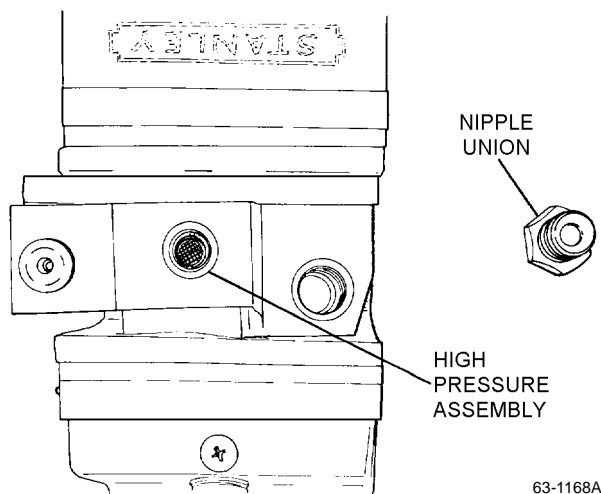
Step 3c - Para 3-47

d. Remove and discard O-ring from piston.

4. Disassemble high pressure assembly as follows:

a. Position and secure oxygen pressure reducer with high pressure assembly facing up.

b. Remove nipple union with appropriate wrench.



Step 4b - Para 3-47

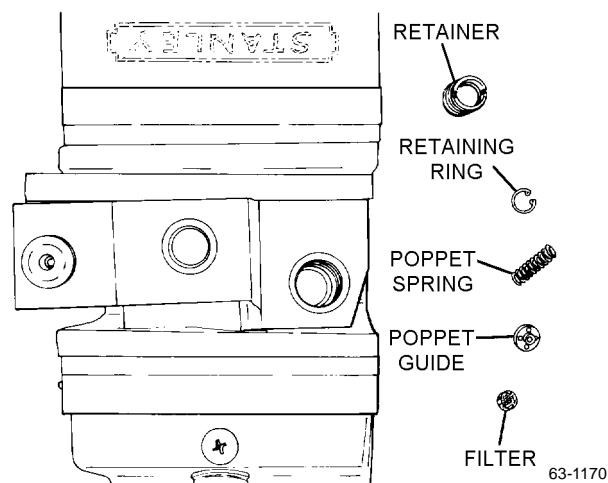
c. Remove and discard O-ring from nipple.

f. Remove filter, poppet guide, and poppet spring from retainer.

NOTE

The retaining ring, filter, poppet, guide, and spring usually withdraw from the reducer assembly housing still connected to the retainer unit.

d. Using torque adapter, remove retainer from reducer body, by rotating counterclockwise.



Step 4f - Para 3-47

NOTE

In some instances the seat will not come out with the stop; instead it will stay pressed in the reducer sealing groove. If this condition occurs, perform [steps h, i, and j](#) in order to facilitate removal without damaging the reducer body.

g. Invert pressure reducer body and remove poppet, backup stop ring, and seat.

NOTE

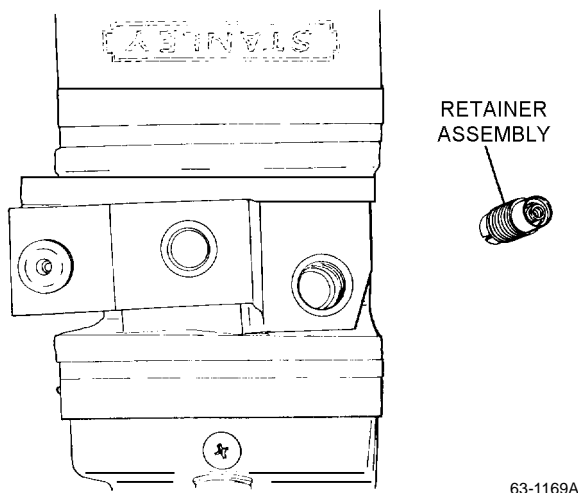
Follow procedures in [steps h, i, and j](#) only if high pressure assembly seat cannot be readily removed.

h. (Use only if seat must be dislodged) Insert seat removal tool into pressure reducer body.



Do not cut into reducer body.

i. (Use only if seat must be dislodged) Rotate seat removal tool until seat is loosened from reducer sealing groove.

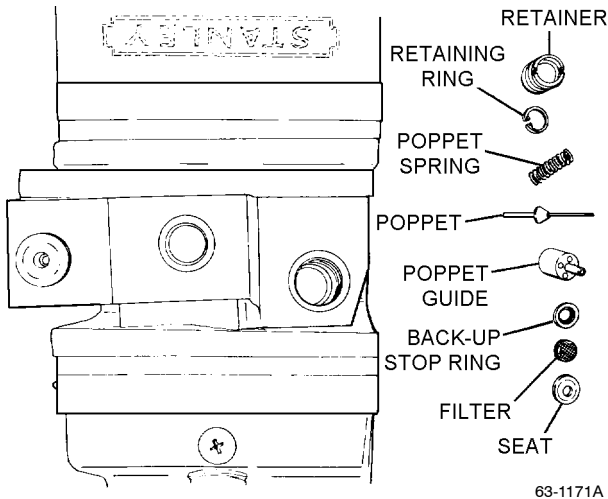


Step 4d - Para 3-47

e. Remove retaining ring, using retaining ring pliers (S0100) or equivalent.

NAVAIR 13-1-6.3-2

- j. (Use only if seat must be dislodged) Visually inspect seating area inside reducer body to ensure seat has been dislodged and removed. Remove any remaining foreign matter.
- k. Replace worn or defective parts as necessary.



Step 4k - Para 3-47

3-48. CLEANING.

3-49. To clean the disassembled oxygen and non-oxygen components of the kit (except for cushions and fabric components) refer to NAVAIR 13-1-6.4-1.

3-50. CLEANING CUSHIONS AND FABRIC COMPONENTS. Clean seat, thigh support cushions, and all fabric components, as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|----------------------------|---------------------------------|
| As Required | Cleaning Compound | MIL-C-25769 |
| As Required | Detergent, General Purpose | MIL-D-16791 |
| As Required | Lint-free Cloth | MIL-C-85043 NIIN 00-044-9281 |

NOTE

If using cleaning compound (MIL-C-25769), combine one part compound to

three parts water. If using general purpose detergent, follow directions on container.

1. Prepare detergent or cleaning compound (MIL-C-25769) solution.
2. Apply solution to soiled area with spray or sponge.
3. Allow solution to remain on surface for few minutes; then scrub with soft brush or cloth.
4. Rinse surface thoroughly with water; wipe with cloth or sponge.

NOTE

Repeat steps 1 through 4 until material is clean.

5. Repeat step 4 until material is free from all solution.
6. Allow material to dry thoroughly.

3-51. INSPECTION OF DISASSEMBLED PARTS.

3-52. Inspect disassembled seat survival kit parts for distortion, corrosion, or other damage in accordance with table 3-8. Inspect survival items in accordance with NAVAIR 13-1-6.5, Rescue and Survival Equipment, and NAVAIR 13-1-6.7-2, Aircrew Personal Protective Equipment (Clothing).

3-53. REPAIR AND REPLACEMENT.

3-54. REPAIR. Repair of individual components within any assembly is authorized only in accordance with procedures outlined in this manual. All authorized repairs performed shall be documented by making necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

3-55. Repair of Cushion Assemblies. Repair of the cushion assemblies is limited to sewing of loose or open seams, broken stitches, and small rips and tears.

Table 3-8. Inspection

| Component | Task |
|---|--|
| Survival Kit (Figures 3-25 and 3-26) | |
| Cushion Assembly and Thigh Support Cushions | Inspect for fabric damage and loose or broken stitching. |
| | Ensure that hook tape is firmly attached to cushion assemblies. |
| | Inspect ventilated cushion coupling for weak spring clip. |
| Dropline Assembly | Inspect boot for fabric damage and loose, broken or frayed stitching. |
| | Check dropline for material damage, loose, frayed or broken stitching. |
| Harness Assembly | Check harness assembly for retention pin damage and presence of locknut. |
| | Inspect aft-most hole serving as attachment for lug pin for elongation. |
| | Check webbing for wear, damage and for frayed, broken or loose stitching. |
| | Inspect adapter for obvious damage, corrosion, and wear. |
| | <u>Check force required for adjuster to release webbing. Maximum pull force shall not exceed 8 lbs. on yellow webbing tab.</u> |
| Release Handle Assembly | Check molded grip for cuts and breaks. |
| Raft Cover | Examine for damaged fabric and loose, broken or frayed stitching. |
| Equipment Container Assembly | Check slide fastener for security of attachment and trouble-free operation. |
| | Inspect container material for damage and for loose, broken or frayed stitching. |
| Survival Items | Inspect in accordance with NAVAIR 13-1-6.5. |
| Lid Assembly (Figure 3-27) | |
| Lid Assembly | Inspect for cracks, damage to fiberglass and attached extruded metal lip. |
| Pile Tape Fasteners | Check all tape fasteners for secure attachment to fiberglass lid. |
| Plug and Cap Assembly | Inspect chain, plug and cap for damage. |
| | Ensure that chain is securely riveted to plug and cap. |
| Carrying Handle | Check webbing for wear damage, and for frayed, broken or loose stitching. |

Table 3-8. Inspection (Cont)

| Component | Task |
|-----------------------------------|---|
| Lid Assembly (Figure 3-27) (Cont) | |
| Oxygen Cylinders | Inspect end fittings for damage. |
| | Check cylinders for bulges, cracks, nicks, gouges or scratches which penetrate metal. |
| Manual Oxygen Release | Inspect handle and cable for obvious defects. |
| Automatic Oxygen Release | Check cable housing for obvious damage and secure attachment to conduit. |
| | Inspect knurled end fitting. |
| | Inspect coupling assembly for spring security. |
| | Inspect that the coupling assembly has not separated from the rest of the cable. |
| Cable Assemblies | Check balls for secure attachment on respective cables. |
| | Examine cables for deformation, broken strands or other obvious defects. |
| | Check conduits for loose or cracked joints, cracked tubing, flattened, dented or out of round tubing diameters. |
| Check Valve | Inspect for damaged threads and rounded hexagon flats. |
| Lid Latches | Check for damage and misalignment. |
| Manifold Assembly (Figure 3-28) | |
| Check Valve | Inspect for damaged threads and rounded hexagon flats. |
| Relief Valve | Inspect for damaged threads and rounded hexagon flats. |
| Manifold Body | Inspect manifold for thread damage. |
| Reducer Assembly (Figure 3-29) | |
| Oxygen Gage | Check gage for broken or missing glass and broken or jammed needle. |
| Filler Valve Assembly | Inspect for damaged threads, rounded hexagon flats and condition of valve core (as applicable). |
| Toggle | Visually inspect toggle resetting slot for galling. Examine pinholes for wear and damage. |
| Body | Check for gouges and other obvious damage. Inspect threads for damage. |

Table 3-8. Inspection (Cont)

| Component | Task |
|--|--|
| Container Assembly (Lower) (Figure 3-30) | |
| Lower Container Assembly | Check for cracks and damage to fiberglass and attached extruded metal lip. Ensure that extruded metal lip is secured to fiberglass and there is no separation between parts. If fiberglass is cracked, refer to NAVAIR 01-1A-21 for repair procedures. |
| Handle Protector | Examine protector for obvious defects and security of attachment. |
| Radio Bracket Assembly | Check bracket for secure attachment to container. Examine hook and pile tapes for security of attachment. |
| Pile Tape | Check all tape fasteners for secure attachment to fiberglass container. |
| Pad | Examine pad for general condition and security of attachment. |
| Lock Assemblies (Figures 3-31 and 3-32) | |
| Cover | Check for distortion and cracks in area of holes. |
| All Locknuts and Nipples | Inspect for cracks and thread damage. |
| | Check for rounded corners of hexagon flats. |
| Housing | Inspect holes and threads for damage. |
| Slide | Check slides for distortion and for damage to ends which engage lid latches. |
| Conduits and Cables | Check for broken, bent or crushed conduits. |
| | Inspect cables for damaged or broken strands; check security of terminal balls on cables. |
| Lid Lock Release Assembly (Figure 3-33) | |
| Cover | Check for distortion and cracks in area of holes. |
| Housing | Inspect holes and threads for damage. |
| Lid Lock Release | Check for damage, corrosion or any other defects. |

3-56. Repair/Replacement of Oxygen Gage Window.

| Materials Required | | |
|--------------------|-----------------------------|---|
| Quantity | Description | Reference Number |
| 1 | Window, Observation | 308411 NIIN 00-059-6401 |
| As Required | Adhesive, Cyanoacrylate or | MIL-A-46050 NIIN 00-142-9193 |
| | Adhesive, Cellulose Nitrate | MIL-A-388A P/N A-A-529 NIIN 00-270-8150 |

1. Ensure both surfaces to be bonded are clean and dry.



Avoid adhesive contact with skin and eyes.

NOTE

Cure time for adhesive MIL-A-46050 is one hour after parts are mated together.

Cure time for adhesive A-A-529 is 24 hours after parts are mated.

2. Apply small amount of adhesive around edge of window opening in lid assembly and on rim of window.

3. Bond both surfaces together and hold until adhesive is set.

3-57. REPLACEMENT. All individual components that fail to pass inspection shall be replaced except where repair procedure is indicated. Refer to source code listing (SM&R CODE) in the Numerical Index of the Illustrated Parts Breakdown to aid in determining replaceable components. All adjustable compo-

nents or assemblies that fail to pass respective tests shall be adjusted to meet required specifications.

3-58. (East/West) Replacement of Lapbelt Adjuster. To replace missing or damaged lapbelt adjuster on the restraint harness, proceed as follows:

| Materials Required | | |
|--------------------|---|---|
| Quantity | Description | Reference Number |
| As Required | Adjuster, Lapbelt | P/N 184C100-1 (CAGE 30941) |
| As Required | Sealing, Locking, and Retaining Compound, Grade A | MIL-S-22473 NIIN 00-953-2205 (Note 1) |

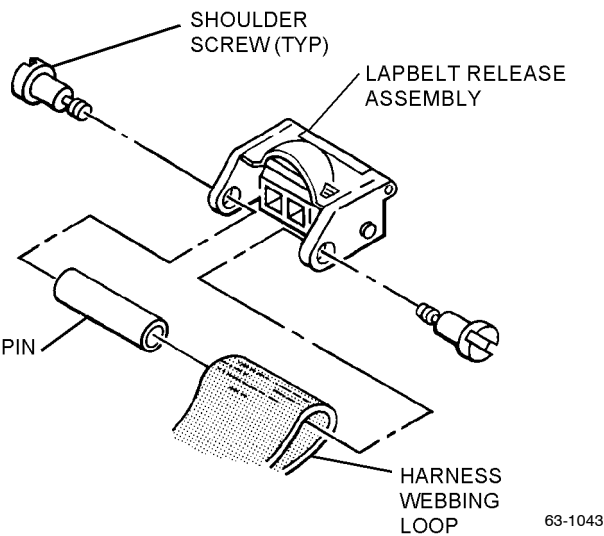
- Notes: 1. Use any contrasting color.

NOTE

Replacement procedures can be used on both right and left side restraint harness assemblies.

1. Remove existing lapbelt adjuster from restraint harness as follows:

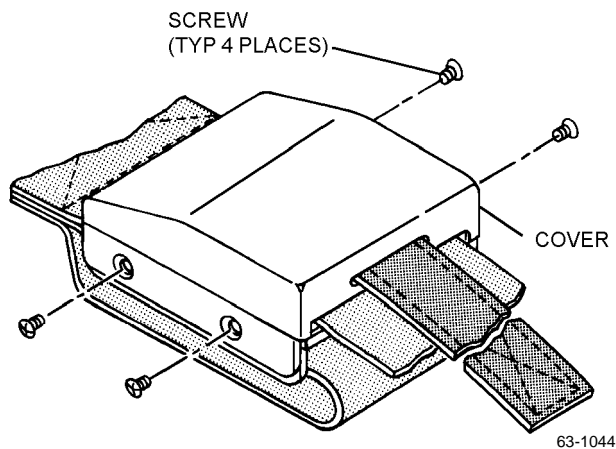
- a. Remove lapbelt release assembly by removing two shoulder screws. Pull release assembly away from webbing, and slide pin out of harness webbing loop. Retain all parts.



63-1043

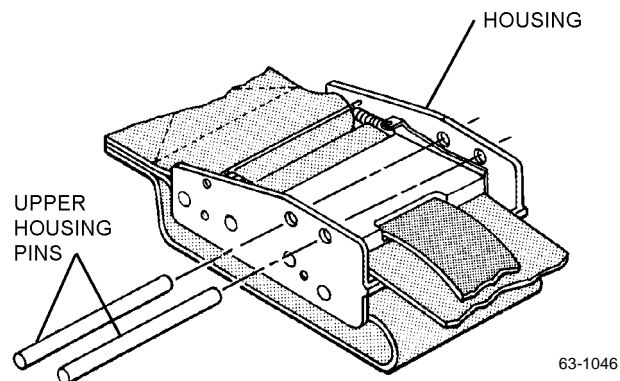
Step 1a - Para 3-58

b. Remove four screws (two on each side) from cover of lapbelt adjuster assembly.



Step 1b - Para 3-58

d. Slide upper housing pins out of housing.

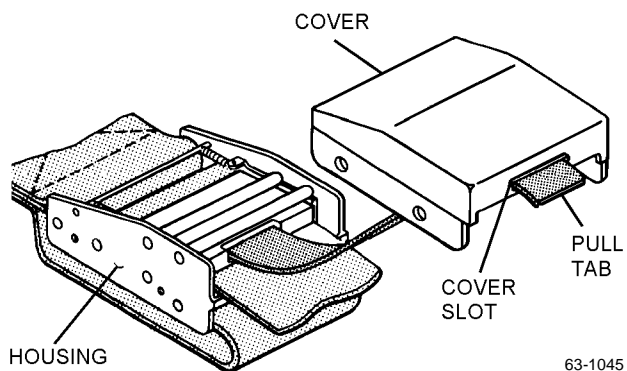


Step 1d - Para 3-58

NOTE

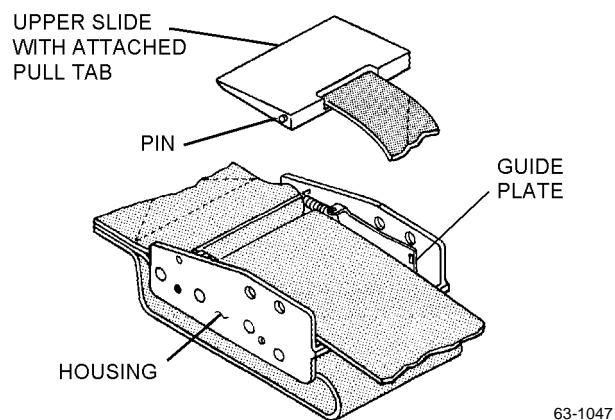
Slides are held to guide plates by pins. Pull slide up so guide plates are above edge of housing, and rotate slide out of guide plates.

c. Remove cover from lapbelt adjuster housing, and slide pull tab through cover slot.



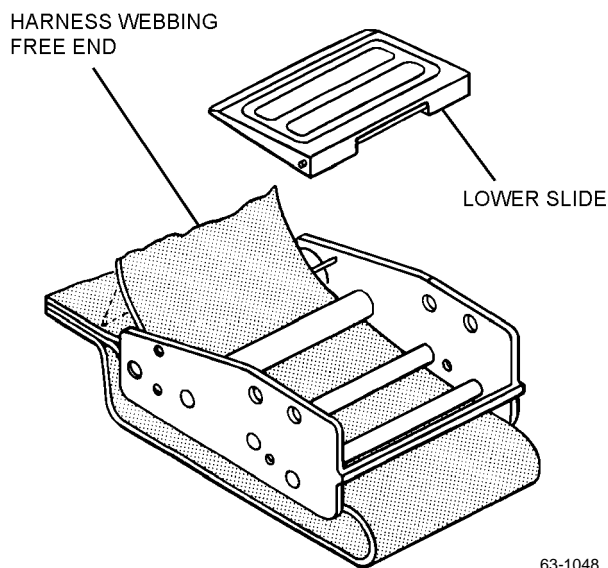
Step 1c - Para 3-58

e. Remove upper slide with attached pull tab.



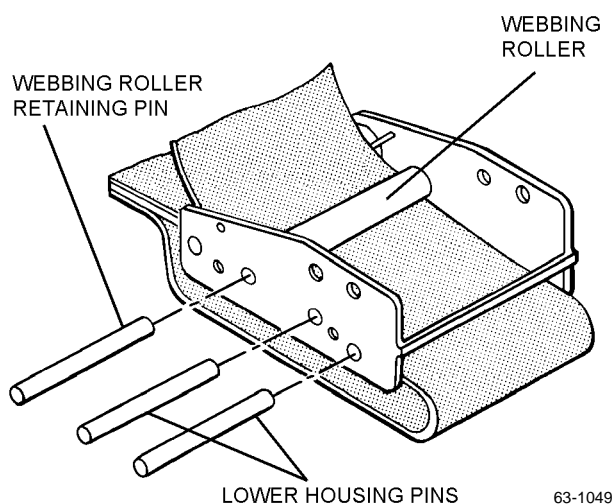
Step 1e - Para 3-58

f. Lift free end of harness webbing, and remove lower slide.



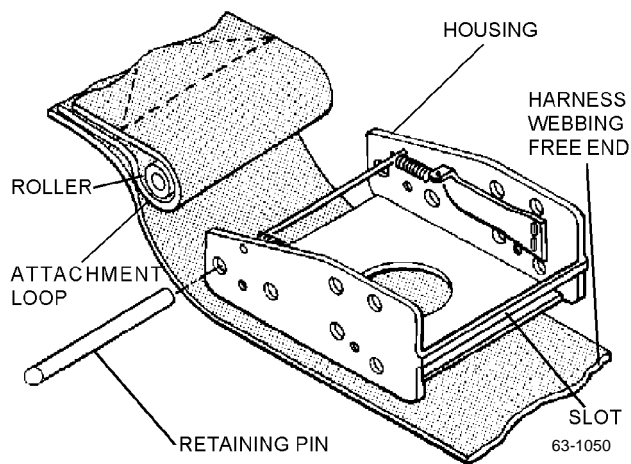
Step 1f - Para 3-58

g. Position guide plates up and out of way. Remove two lower housing pins and webbing roller retaining pin. Webbing roller will fall away.



Step 1g - Para 3-58

h. Pull free end of harness webbing through slot in housing. Remove pin retaining harness webbing attachment loop roller. Housing will fall away.



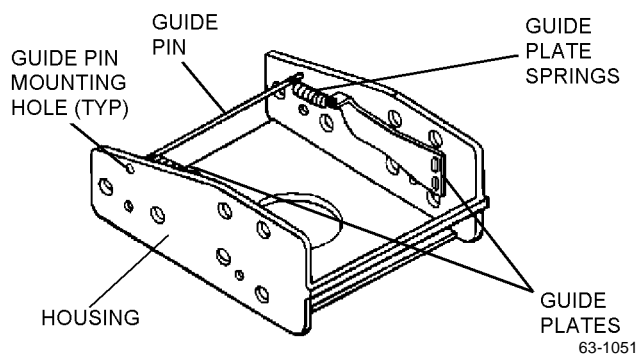
Step 1h - Para 3-58

2. Install new lapbelt adjuster as follows:

NOTE

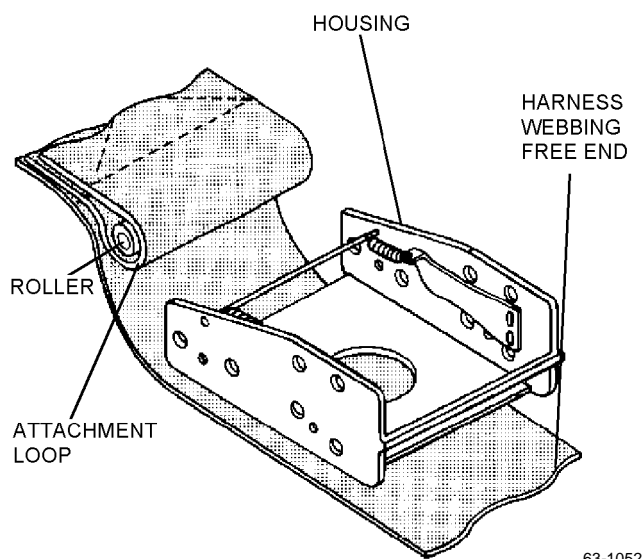
The six pins (two retaining and four housing) are interchangeable. The two rollers are interchangeable.

a. If required, slide guide plate springs onto guide pin; ensure guide plates are positioned correctly. Install assembly into adjuster housing guide pin mounting holes.



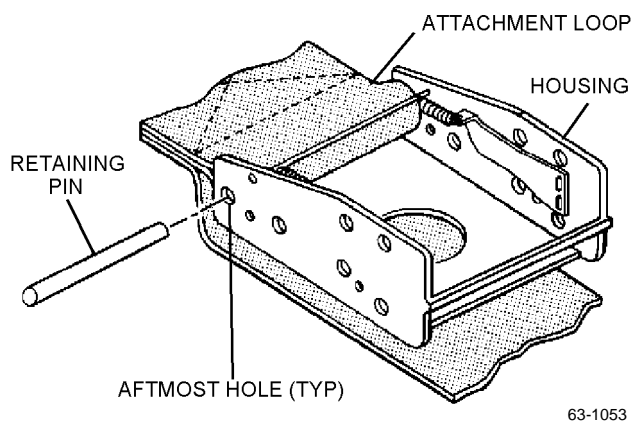
Step 2a - Para 3-58

b. Insert roller into attachment loop of harness webbing. Place adjuster housing on top of free end of harness webbing so that aft end of housing faces attachment loop.



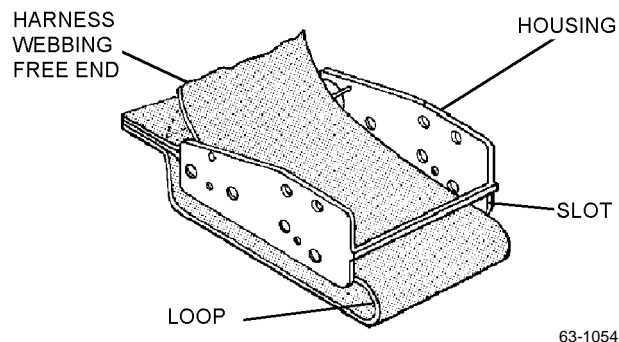
Step 2b - Para 3-58

c. Position housing onto attachment loop and roller. Align hole through roller with proper holes in housing, and install retaining pin.



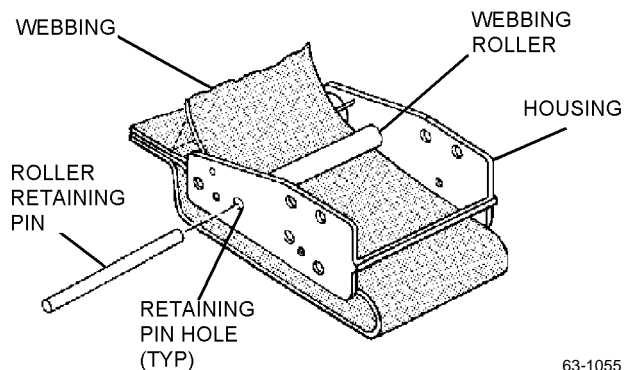
Step 2c - Para 3-58

d. Fold free end of webbing back towards housing. Insert end through slot in housing to form loop in webbing forward of adjuster. Guide plates may be positioned up and back to avoid any interference.



Step 2d - Para 3-58

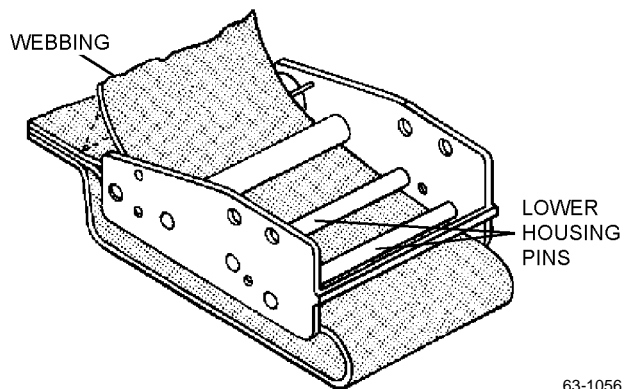
e. Install webbing roller into housing on top of webbing. Position roller to align with proper holes in housing, and insert roller retaining pin.



Step 2e - Para 3-58

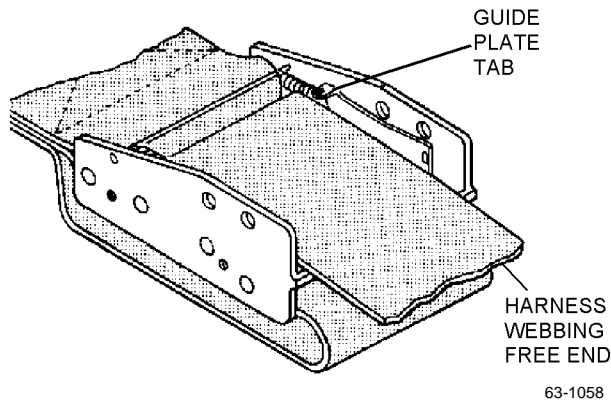
NAVAIR 13-1-6.3-2

f. Insert lower housing pins; ensure pins are resting on top of webbing.



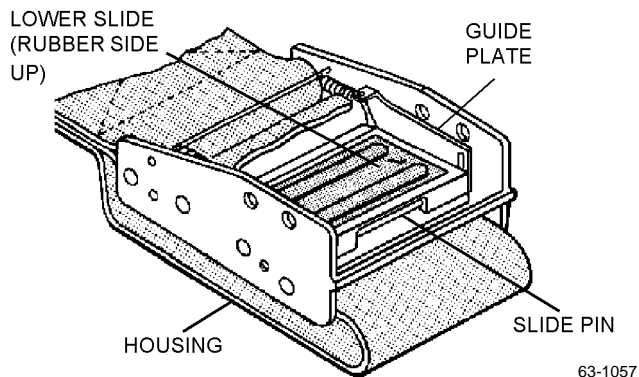
Step 2f - Para 3-58

h. Position harness webbing free end under tabs of guide plates, and lay webbing down over lower slide.



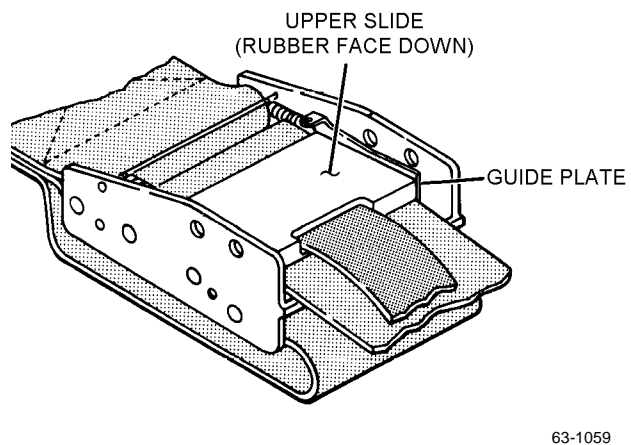
Step 2h - Para 3-58

g. Position guide plates into housing on top of lower housing pins; install lower slide rubber side up. Ensure slide pin is correctly positioned into lower slots of guide plates.



Step 2g - Para 3-58

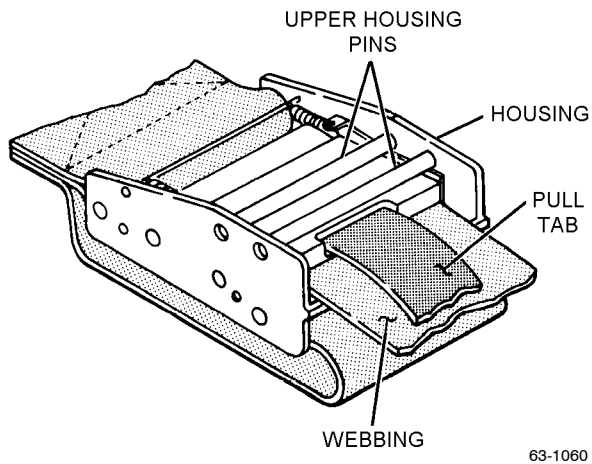
i. Install upper slide, rubber face down. Ensure lower slide does not come out of place. Ensure slide pins sit securely in slots of guide plates.



Step 2i - Para 3-58

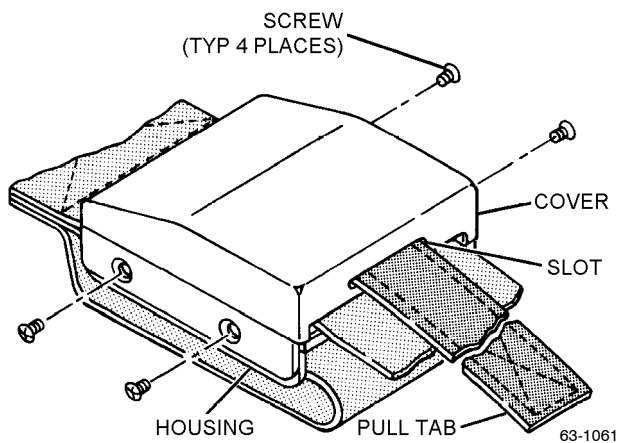
j. Install upper housing pins. Ensure slides operate correctly; pull on pull tab to check simultaneous movement of slides. Webbing shall slide with ease through adjuster in either direction.

3-59. Deleted.



Step 2j - Para 3-58

k. Insert pull tab from inside out, through slot in cover. Place cover on housing and align four screw holes. Apply sealing compound to threads of four screws, and secure cover to housing.



Step 2k - Para 3-58

3. Apply sealing compound to threads of two shoulder screws, and install lapbelt release assembly removed in [step 1a](#).

4. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

Pages 3-57 thru 3-60 - Deleted.

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3-60. ASSEMBLY.**NOTE**

The tamper dot on the Oxygen Hose Assembly shall be applied to the fitting in a manner which provides easy identification for inspection purposes when the seat kit is installed in the seat.

3-61. ASSEMBLY OF SKU-2/A SEAT SURVIVAL KIT. Assemble using the index numbers of [figures 3-25 through 3-33](#) as a reference. Assemble in reverse order of disassembly ([paragraph 3-45](#)), and as per the following steps:

1. Refer to [Appendix B](#) for the proper torque of nuts and fittings.

NOTE

Use any contrasting color when applying tamper dots to oxygen fittings.

2. Apply tamper dots to all oxygen fittings shown on [figures 3-25 through 3-33](#). Use lacquer specification MIL-L-7178, Fed. Std. 595.

3. Torque value for inlet tubing connector on oxygen hose assembly shall be 80 to 100 in-lb and torque for the outlet tubing connector on oxygen hose assembly shall be 100 to 125 in-lb.

4. Prior to applying sealing compound, wipe off any contaminants with cloth moistened with water.

5. Apply sealing compound to 50% of threads on parts indicated in Illustrated Parts Breakdown.

| Materials Required | | |
|--------------------|------------------------------------|---|
| Quantity | Description | Reference Number |
| As Required | Nitrogen, Type I, Class I, Grade A | B-N-411 |
| As Required | Krytox 240AC, Type II | MIL-G-27617 NIIN 00-961-8995 |
| As Required | Leak Detection Compound, Type I | MIL-L-25567 |
| As Required | Neoprene Adhesive | MMM-A-121 |
| As Required | Structural Adhesive | EC1648AB (CAGE 04963) |
| As Required | Tees, Tubing, Fittings | — |
| 2 | Cap Screws, 10 x 32 | — |
| As Required | Sealing Compound, Grade E/EV | MIL-S-22473 (Note 1) |
| As Required | Sealing Compound, Grade C/CV | MIL-S-22473 (Note 1) |
| As Required | Lacquer | MIL-L-7178 |
| As Required | Dry Film Lubricant | MIL-L-60326 |

Notes: 1. Use any contrasting color.

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|-----------------------------------|------------------|
| 1 | Arbor Press | — |
| 1 | Spanner Wrench | — |
| 1 | Flow Rater, 0-150 LPM Range | — |
| 1 | Test Gage, 0-160 PSI Range | — |
| 1 | Dial Indicator Depth Gage | D412.5 |
| 3 | On-Off Valves | — |
| 1 | Water Beaker | — |

WARNING

Before use, inspect leak detection compound. Compound which is not clear and free from suspended material/sediment is considered contaminated and shall be disposed of. Compound exhibiting peculiar odors, such as acetone or alcohol, is considered contaminated and shall be disposed of.

3-62. ASSEMBLY OF PRESSURE REDUCER

ASSEMBLY. The following procedures assemble the reducer assembly into four major operations: assembly of the high pressure assembly; assembly of low pressure assembly; assembly and preadjustment of the adjustment assembly; and assembly of oxygen gage, filler valve, adapter, and plug. It is imperative that the following assembly sequence be followed if the entire reducer assembly has been disassembled. See [figure 3-15](#), and proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|----------------------------|---------------------------------|
| As Required | Krytox 240 AZ, Type I | MIL-G-27617 NIIN 01-007-4384 |
| As Required | Tape, Antiseize | MIL-T-27730 |
| As Required | Thread Locking Compound | VC-3 (CAGE 04866) |
| As Required | Plastic Bag | MIL-B-117 |
| 1 | Spring Pin | MS171435 |
| 2 | O-ring | MS9068-012 |
| 1 | O-ring | MS28775-117 |
| 1 | Filter | 204B419-11 |

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|--|--|
| 1 | Vise | — |
| 1 | Pressure Reducer Tool Set (figure 3-16) | T216D900-1 (CAGE 30941) NIIN 01-100-8928 |
| 1 | Retaining Ring Pliers | S0100 (CAGE 79136) |
| 1 | Retaining Ring Pliers | SL0100 (CAGE 79136) |
| 1 | Torque Wrench 0-150 lb-in | TE-6FUA (CAGE 55729) or Equivalent |
| 1 | Toggle Reset Tool | Fabricate IAW paragraph 3-70 |

WARNING

Do not use oil or any material containing oil in conjunction with oxygen equipment. Oil, even in a minute quantity, coming in contact with oxygen can cause explosion or fire. Dust, lint, and fine metal particles are also dangerous.

NOTE

Maintenance personnel are advised to read and thoroughly familiarize themselves with each step prior to the accomplishment of the operations set forth in this procedure.

Discard and replace all packings, seals, cotter pins, and Teflon sealing tape removed during disassembly of emergency oxygen system.

All complete assemblies not immediately being returned to service shall be sealed in plastic bags with all external fittings properly capped.

1. Assemble high pressure assembly as follows:

NOTE

If the entire reducer assembly has not been disassembled it is necessary to remove the adjustment assembly and low pressure assembly to correctly perform the following assembly procedures.

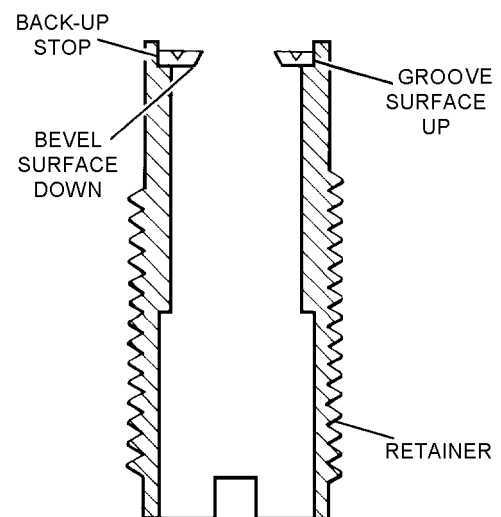
a. Ensure that the adjustment assembly has been removed in accordance with paragraph 3-47.

b. Ensure that the low pressure assembly has been removed in accordance with paragraph 3-47.

c. Ensure that all oxygen components to be assembled have been properly cleaned in accordance with NAVAIR 13-1-6.4-1.

d. Position retainer with threaded side down.

e. Install backup stop in upper groove of retainer, positioning bevel surface down and groove surface up.



63-1172

Step 1e - Para 3-62

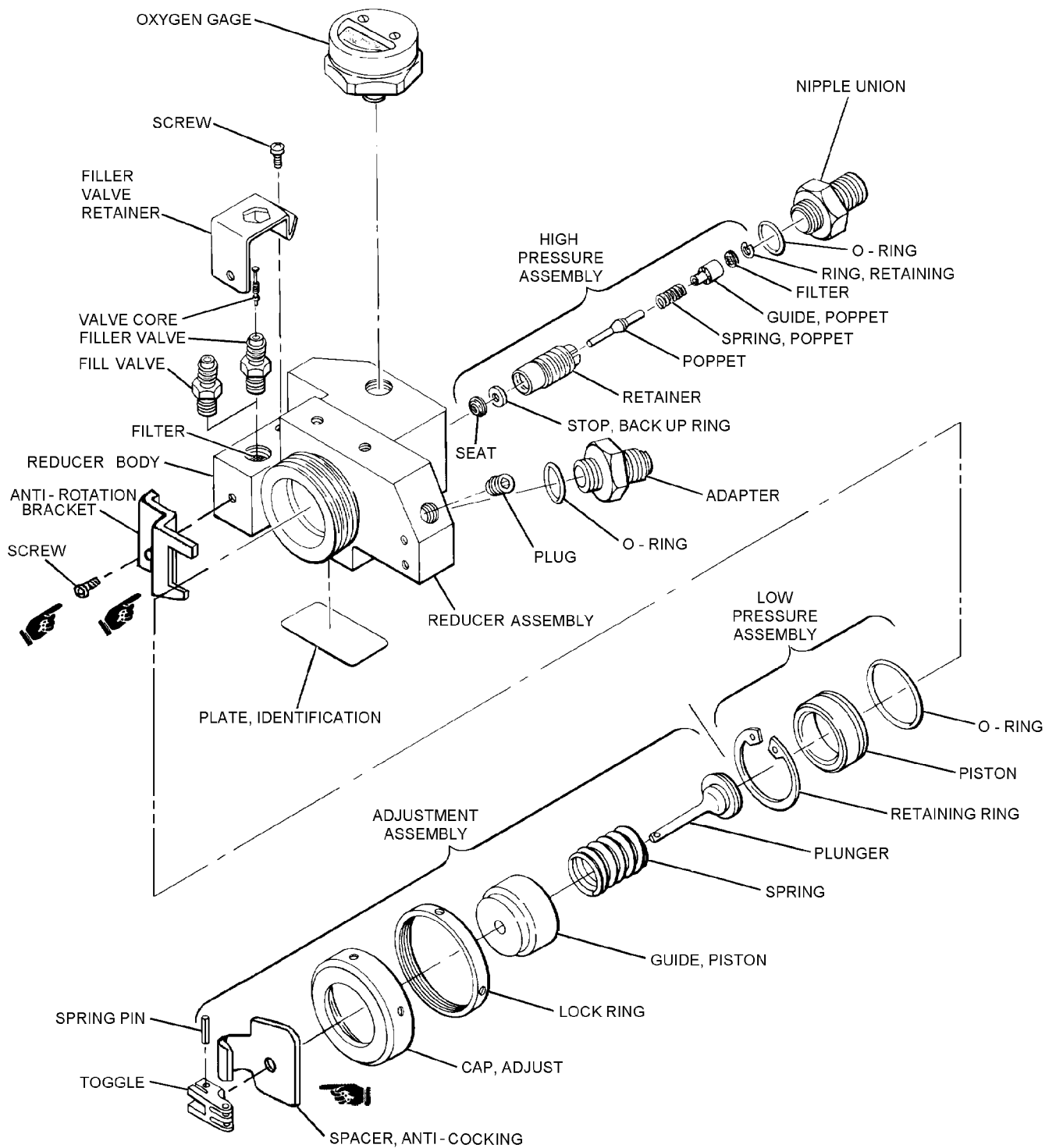
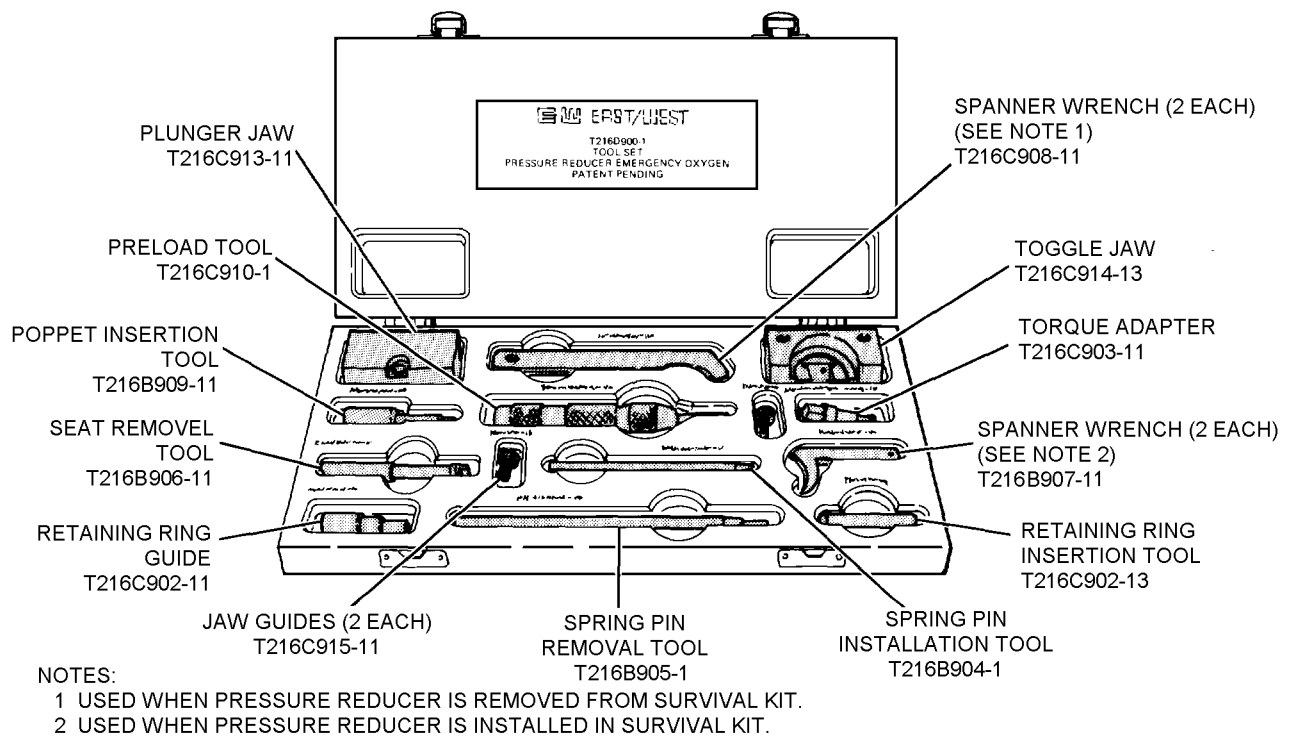


Figure 3-15. SKU-2/A Reducer Assembly

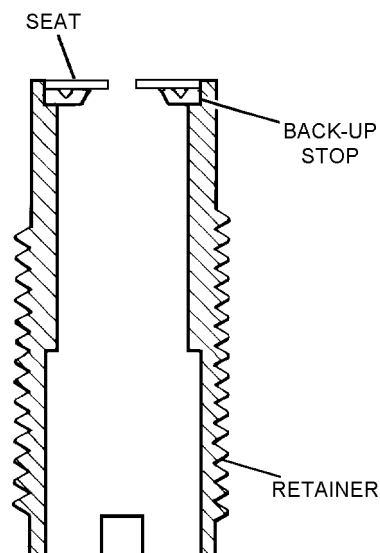
003015



63-1157

Figure 3-16. Emergency Oxygen Pressure Reducer Tool Set

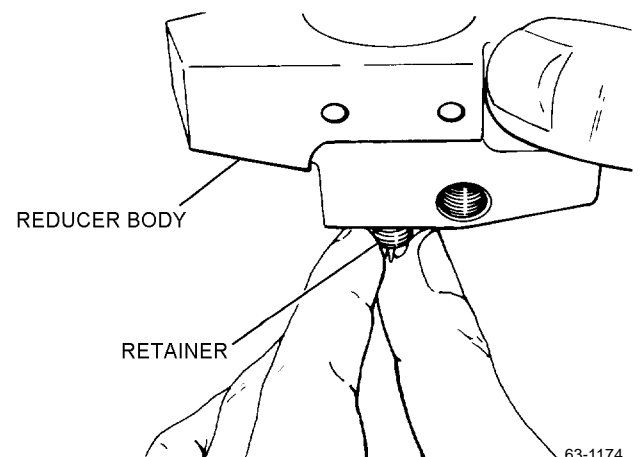
f. Place seat on top of backup stop ensuring proper alignment within retainer groove. Push firmly on seat with finger so that seat is retained in place.



63-1173

Step 1f - Para 3-62

g. While holding retainer in an upright position with backup stop and seat positioned on top, lower reducer body onto retainer and slowly screw retainer into high pressure inlet port of reducer body.



63-1174

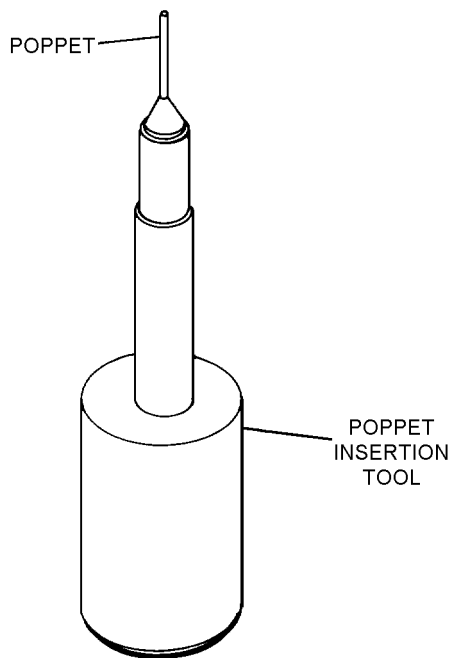
Step 1g - Para 3-62

NAVAIR 13-1-6.3-2

h. Using torque adapter mounted on a 3/8-inch nut driver, continue screwing retainer into high pressure port until snug. Visually inspect for proper alignment of backup stop and seat into reducer body.

i. Torque retainer into reducer body to 32 to 35 lb-in, using retainer torque adapter and torque wrench.

j. Using poppet insertion tool, place poppet into tool so that cone-shaped part of poppet faces away from heavy end of tool.



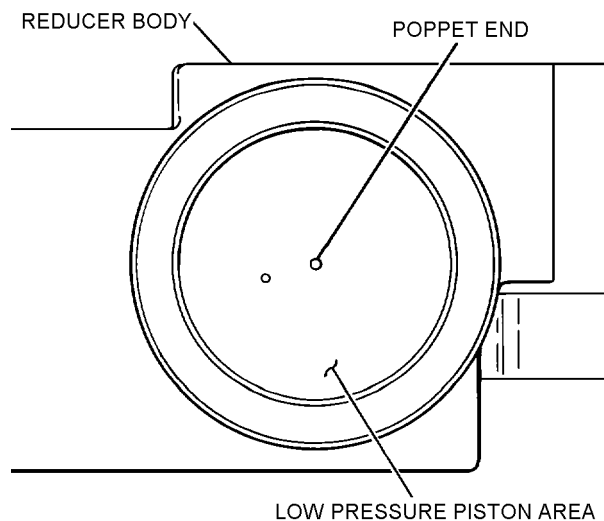
63-1175

Step 1j - Para 3-62



Be careful when inserting poppet that no pressure is applied which could bend poppet shaft. Be certain end of poppet extends into low pressure piston area.

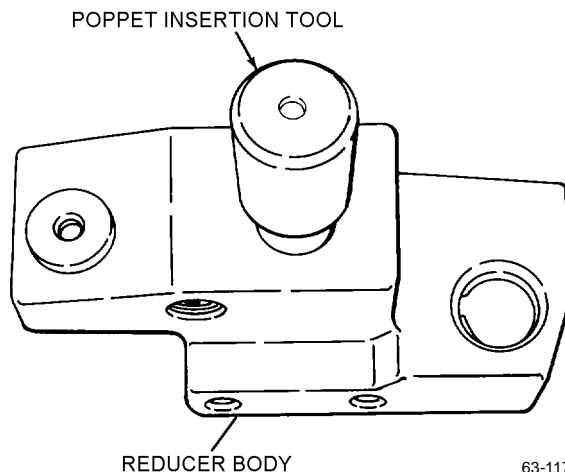
k. Hold reducer body/housing with high pressure retainer side down. Slowly lower reducer housing onto poppet. Carefully rock and turn poppet insert tool until poppet end is seen to extend into low pressure piston area.



63-1176

Step 1k - Para 3-62

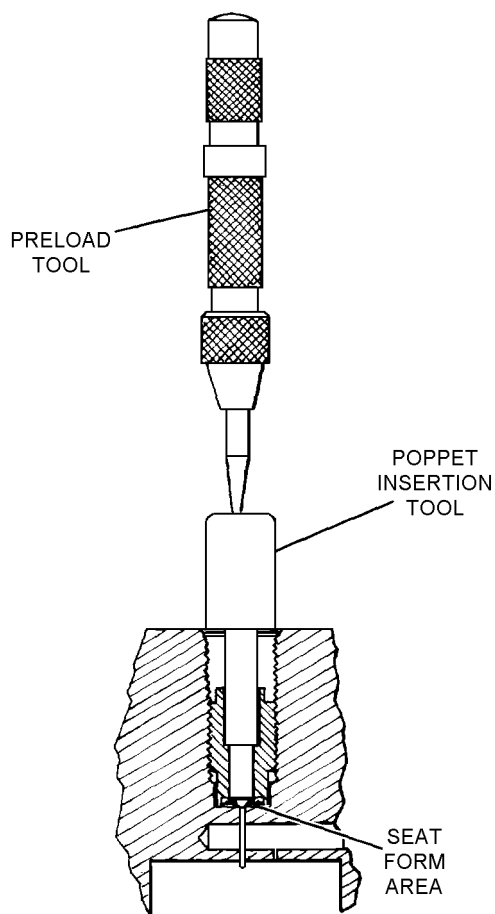
l. Leaving poppet insertion tool inserted, turn entire assembly over so that high pressure or retainer assembly and poppet insertion tool are now facing up.



63-1177

Step 1l - Para 3-62

m. Place preload tool into dimple on top of poppet insertion tool. Press down once on preload tool until it unloads with a snap. This forms seat into its correct angle.

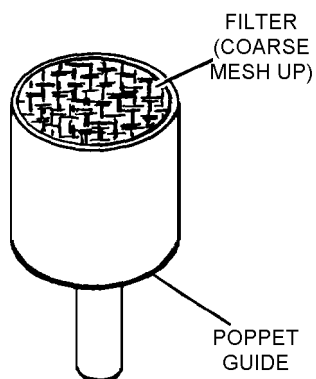


Step 1m - Para 3-62

63-1178

n. Remove poppet insertion tool so that poppet remains positioned inside reducer body against seat.

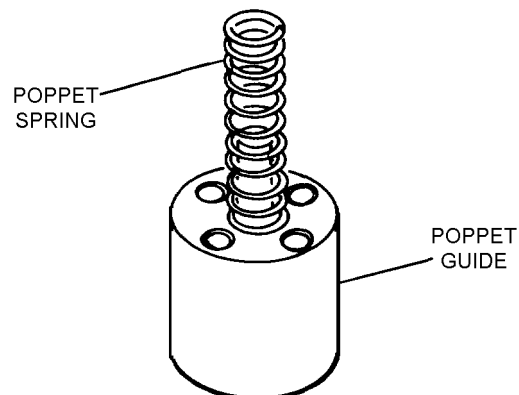
o. Press filter, with coarse mesh up, into wide end of poppet guide.



Step 1o - Para 3-62

63-1179

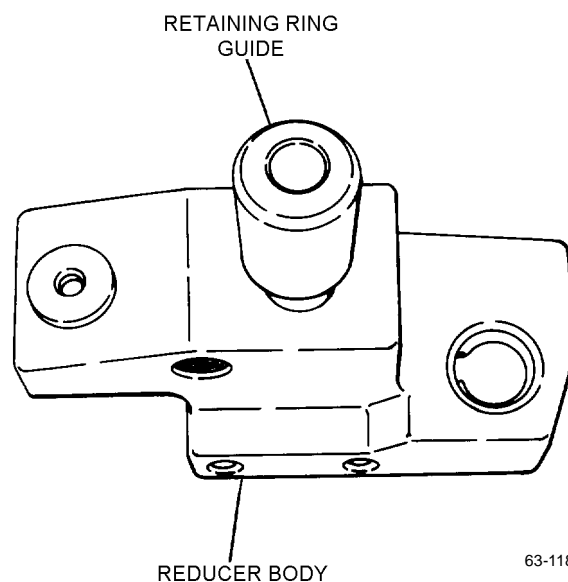
p. Secure poppet spring to poppet guide by pressing spring onto shaft end of guide.



63-1180

Step 1p - Para 3-62

q. Position retaining ring guide into retainer so that the tool engages tangs of retainer.



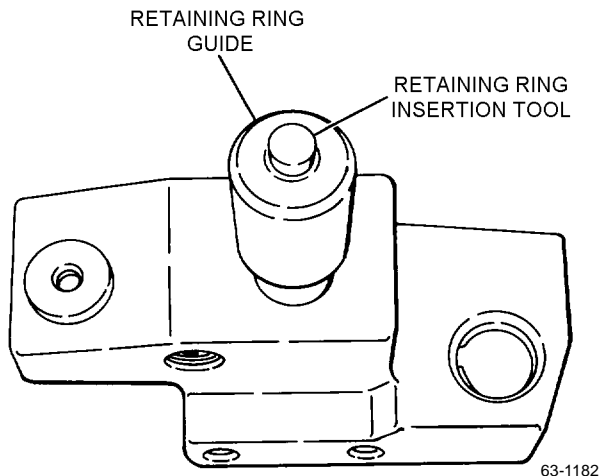
63-1181

Step 1q - Para 3-62

NAVAIR 13-1-6.3-2

r. Insert poppet guide and spring with spring end down into opening in retaining ring guide.

s. Using retaining ring insertion tool, ensure that poppet guide and spring are properly positioned inside retainer.

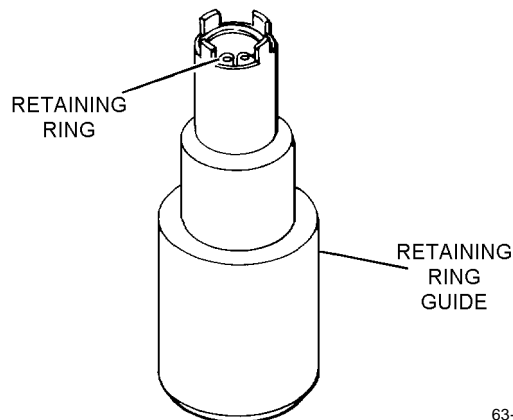


Step 1s - Para 3-62

t. Remove retaining ring insertion tool and retaining ring guide from reducer housing.

u. Visually check that filter end of poppet guide is slightly higher than ends of retainer.

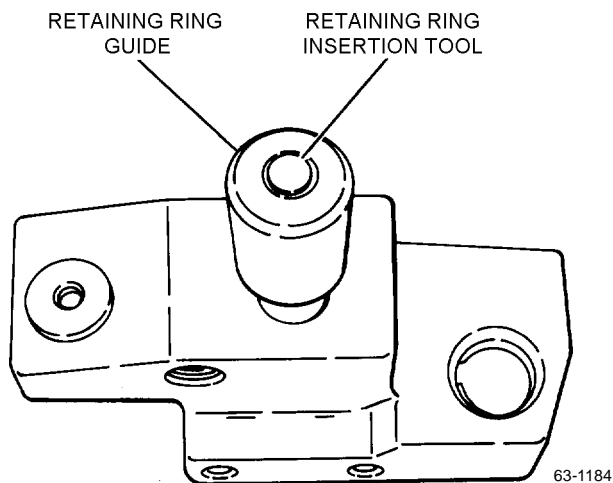
v. Using retaining ring pliers, install retaining ring inside tangs of retaining ring guide.



Step 1v - Para 3-62

w. Insert retaining ring guide into tangs of retainer. Insert retaining ring insertion tool into retaining ring guide.

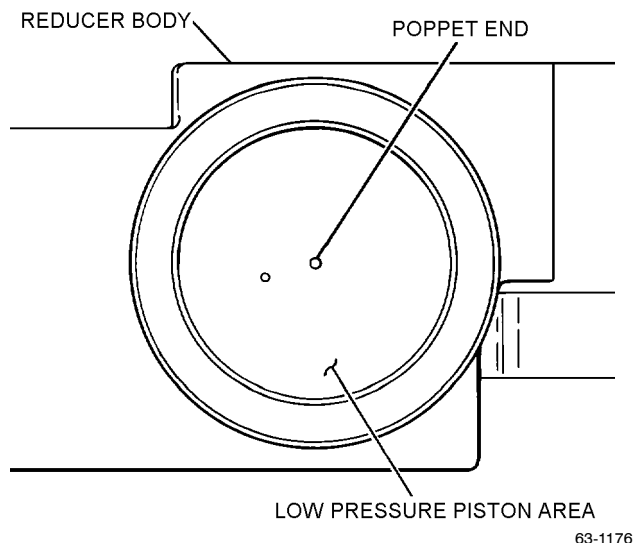
x. Compress poppet spring and seal retaining ring by pressing down on retaining ring insertion tool until flush with tip of retaining ring guide.



Step 1x - Para 3-62

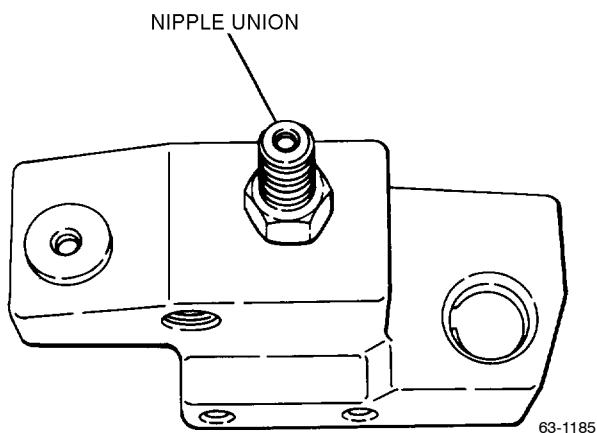
y. Remove retaining ring guide and insertion tool. Ensure retaining ring is properly seated in groove.

z. Verify that tip of poppet extends into lower pressure piston area.



Step 1z - Para 3-62

aa. Lubricate new O-ring and mating surfaces with Krytox 240AZ. Install O-ring on nipple union and install nipple union into reducer housing.



Step 1aa - Para 3-62

2. Assemble low pressure assembly as follows:

a. Ensure that high pressure assembly is properly assembled in accordance with [step 1](#).

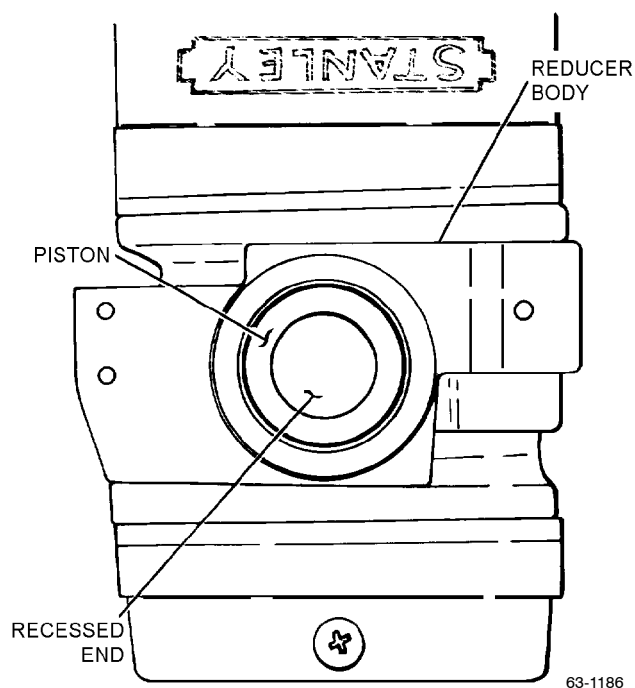
b. Ensure that all oxygen components to be assembled have been properly cleaned in accordance with NAVAIR 13-1-6.4-1.

c. Position oxygen pressure reducer assembly with adjustment side or low pressure side up and secure.

d. Lubricate new O-ring and mating surfaces with Krytox 240AZ. Install O-ring on piston.

e. Lubricate bore of reducer body with Krytox 240AZ.

f. Install piston, recessed end out, in bore of reducer body.



Step 2f - Para 3-62

g. Install retaining ring, using retaining ring pliers.

3. Assemble and preadjust adjustment assembly as follows:

NAVAIR 13-1-6.3-2

a. Ensure that high pressure and low pressure assemblies have been properly assembled in accordance with [steps 1](#) and [2](#).

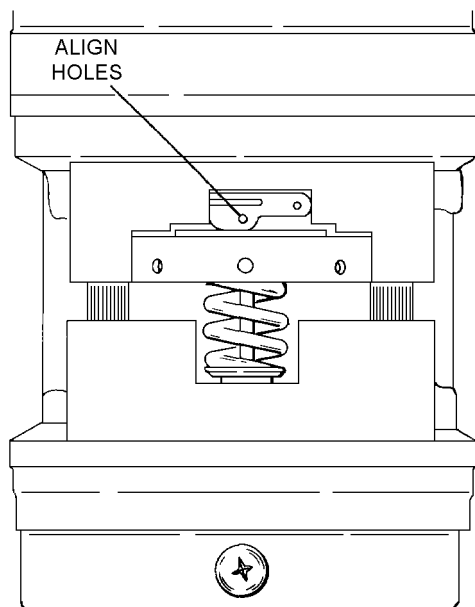
b. Ensure that all oxygen components to be assembled have been properly cleaned in accordance with NAVAIR 13-1-6.4-1.

c. Using appropriate Allen key, screw jaw guides into two threaded holes in toggle jaw.

d. Place toggle and plunger jaws in vise.

e. Assemble adjustment assembly components in proper sequence ([figure 3-15](#)). Position components in toggle and plunger jaws.

f. Apply vise pressure to compress spring. Align hole in toggle with hole in plunger end.



63-1187

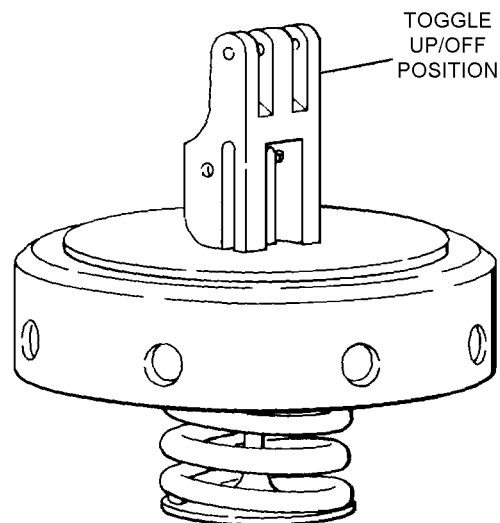
Step 3f - Para 3-62

g. With hole in toggle and hole in plunger aligned, insert new spring pin using spring pin installation tool. Insert spring pin into toggle hole as far as tool will permit. Remove tool and gently drive remainder of spring pin into toggle, using drift pin.

h. Slowly open vise jaws and ensure that assembly is properly secured.

i. Remove adjustment assembly from toggle and plunger jaws.

j. Using toggle reset tool, rotate toggle to upright (OFF) position.



63-1188

Step 3j - Para 3-62

k. Position reducer assembly with cap adjustment side up.

l. Install lock ring onto reducer body.

NOTE

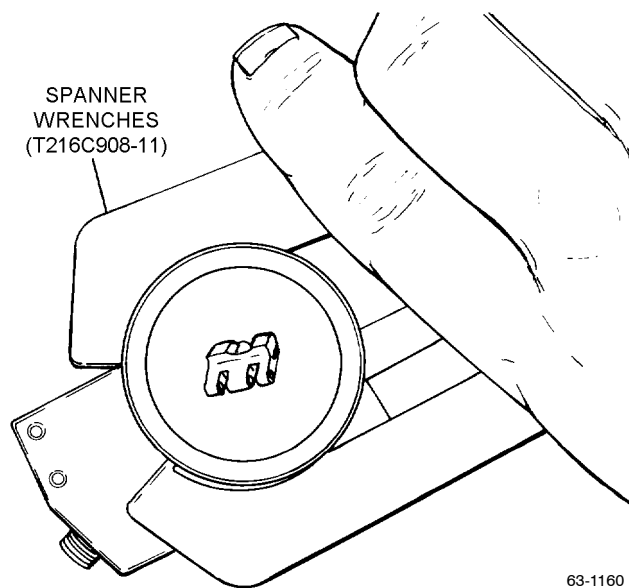
Ensure lock ring does not contact adjustment assembly during installation.

m. Install adjustment assembly onto reducer body by engaging screw threads and rotating clockwise to its lowest position.

n. Back off adjusting cap two complete turns for preadjustment.

o. Turn lock ring counterclockwise until snug with adjusting cap.

p. Place one spanner wrench (T216C908-11) in lock ring and second spanner wrench on adjusting cap and secure.



Step 3p - Para 3-62

4. Assemble oxygen gage, filler valve, adapter, and plug (figure 3-15) as follows:

a. Ensure that all oxygen components to be assembled have been properly cleaned in accordance with NAVAIR 13-1-6.4-1.

b. Apply antiseize tape to threads of oxygen gage. Install gage.

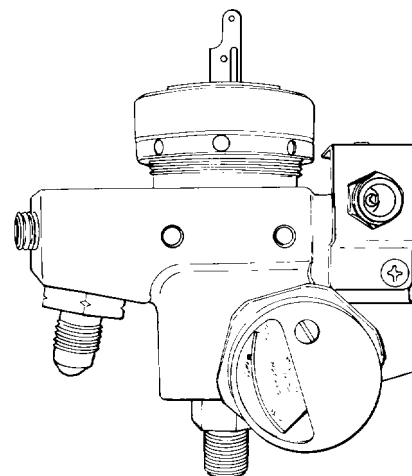
c. Install new filter in filler valve port.

d. Apply antiseize tape to threads of filler valve assembly. Install filler valve assembly.

e. Place retainer over valve body. Apply thread locking compound to screw threads. Insert two screws into retainer and fasten.

f. Apply antiseize tape to threads of plug and install.

g. Lubricate new O-ring and mating surfaces with Krytox 240AZ. Install O-ring in adapter and install adapter into reducer housing.



Step 4g - Para 3-62

3-63. ADJUSTMENT.

3-64. ADJUSTMENT OF PRESSURE REDUCER ASSEMBLY. Adjust flow rate and outlet pressures on the reducer assembly as follows:

Support Equipment Required

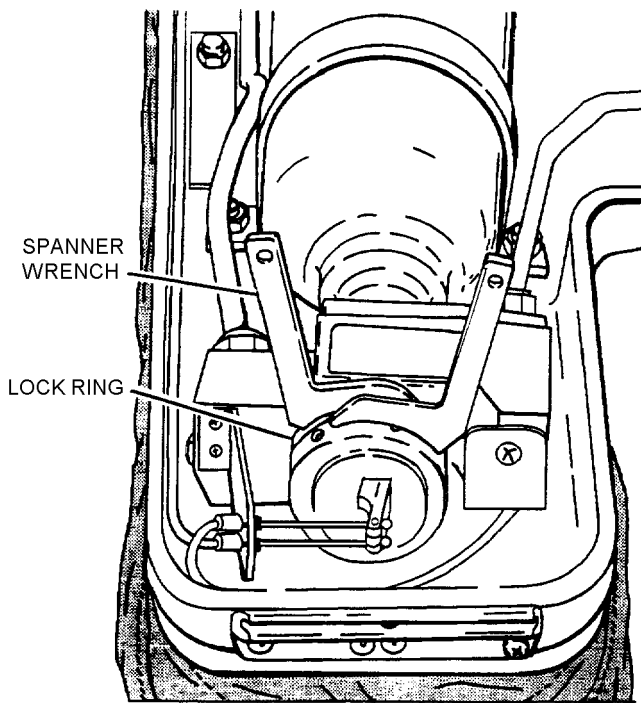
| Quantity | Description | Reference Number |
|----------|----------------------------|-------------------------|
| 2 | Spanner Wrench (Note 1) | T216B907-11 (Note 3) |
| | or | |
| 2 | Spanner Wrench (Note 2) | T216C908-11 (Note 3) |

- Notes:
- 1. Used when pressure reducer is installed in survival kit.
 - 2. Used when pressure reducer is removed from survival kit.
 - 3. The spanner wrenches are part of Pressure Reducer Tool Set P/N T216D900-1 (CAGE 30941).

NOTE

Although the following illustrations depict adjustment of the pressure reducer installed on the upper lid assembly, procedures for a disconnected reducer are the same with the exception of the spanner wrenches used in the adjustment procedures. See Support Equipment Required for correct spanner wrenches.

- 1. Using spanner wrenches, loosen pressure reducer lock ring.



Step 1 - Para 3-64

- 2. Turn adjusting cap counterclockwise to decrease pressure or clockwise to increase pressure.
- 3. Tighten pressure reducer lock ring.
- 4. Perform functional check on kit in accordance with paragraph 3-39.

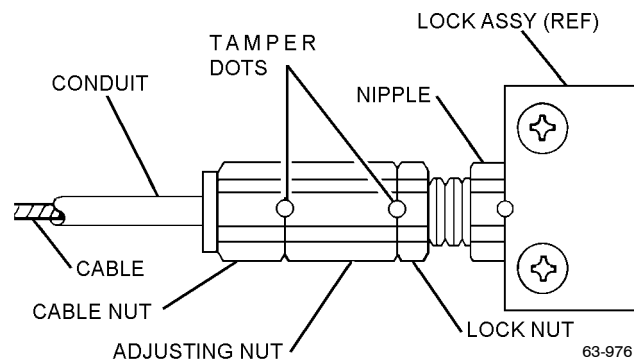
3-65. ADJUSTMENT OF LOCKS AND LID LOCK RELEASE ASSEMBLIES. If lid locks fail to release simultaneously, adjust (advance or retard) as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|------------------------|------------------------|
| As Required | Lacquer, Fed. Std. 595 | MIL-L-7178 (Note 1) |

- Notes:
- 1. Use any contrasting color.

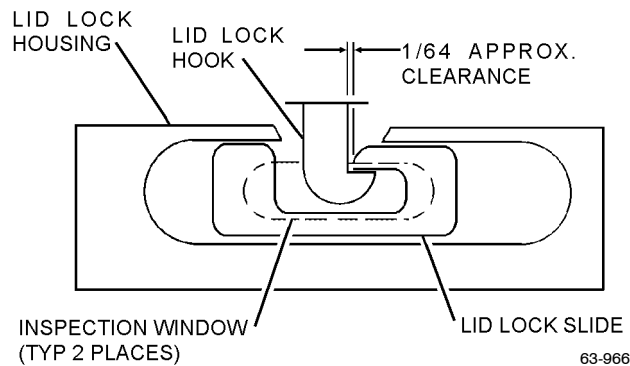
- 1. To advance release operation, loosen lock nut and back off adjusting nut away from assembly to desired amount.



Step 1 - Para 3-65

- 2. When desired timing is achieved, tighten lock nut against adjusting nut.
- 3. To retard release operation, proceed in accordance with steps 1 and 2, except adjusting nut is adjusted toward assembly.

4. Check latches for proper engagement of upper container hooks.



Step 4 - Para 3-65

NOTE

Use any contrasting color when applying tamper dots to oxygen fittings.

5. Apply tamper dots on nuts with lacquer.

3-66. ADJUSTMENT OF AUTOMATIC EMERGENCY OXYGEN ACTUATION CABLE. To inspect and adjust the automatic emergency oxygen lanyard, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|------------------------|---------------------|
| As Required | Lacquer, Fed. Std. 595 | MIL-L-7178 (Note 1) |

Notes: 1. Use any contrasting color.

Support Equipment Required

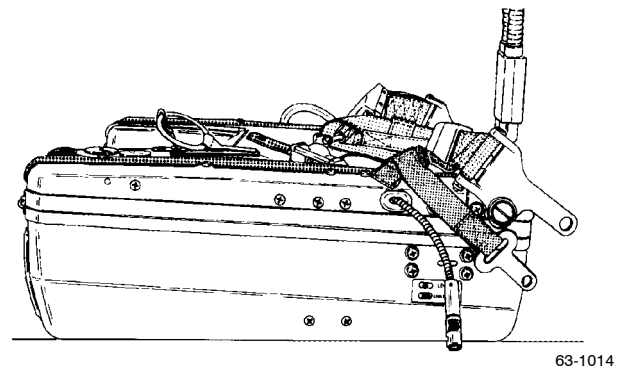
| Quantity | Description | Reference Number |
|----------|--|------------------------------|
| 1 | Automatic Emergency Oxygen Actuation Cable Adjustment Gage | Fabricate IAW paragraph 3-75 |
| | Weight, 5 pounds | — |

1. Remove plug (8, figure 3-27).

2. Using a flashlight, visually inspect position of cable balls (81 and 90, figure 3-27), insure cable balls are not wrapped around reducer toggle (22, figure 3-29) and jammed against inside of kit lid.

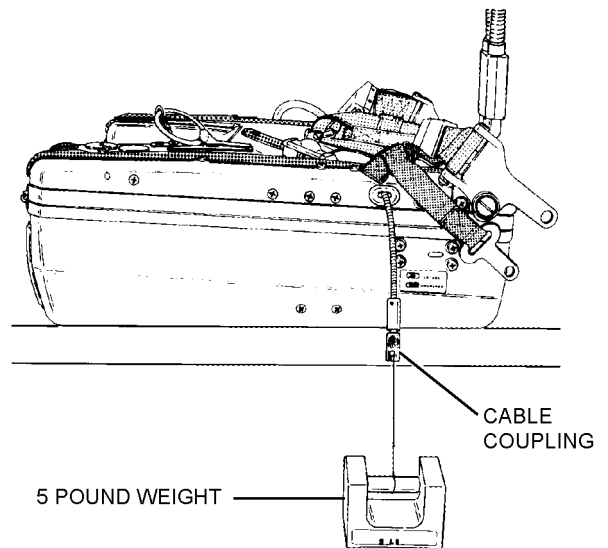
3. If cable balls are not properly positioned, open SKU-2/A and position cable balls so that toggle is free to move and close kit.

4. Position the left side of the SKU-2/A along the tables edge.



Step 4 - Para 3-66

5. Place the automatic emergency oxygen cable in a downward position and attach a 5-pound weight to the cable coupling. Allow cable to hang free.



Step 5 - Para 3-66

6. Fabricate an automatic emergency oxygen actuation cable adjustment gage in accordance with paragraph 3-75.

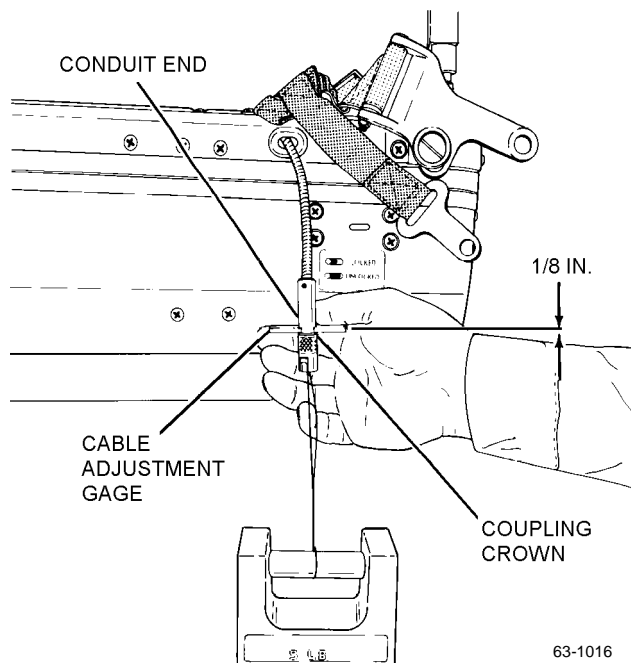
NOTE

With a weight of 5 pounds attached to the cable coupling a slack of 1/8 inch shall exist between the crown of the coupling and the end of the conduit.

7. Insert the automatic emergency oxygen actuation cable adjustment gage between the crown of the coupling and the end of the conduit and measure the gap.

NOTE

If more or less than the 1/8-inch thickness of the adjustment gage exists, adjust the cable assembly in accordance with [steps 8 thru 17](#).



Step 7 - Para 3-66

8. Remove the 5 pound weight from the cable coupling and open kit.

9. Loosen clamp (83, [figure 3-27](#)).

10. Loosen nuts (91 and 92, [figure 3-27](#)) and turn barrel (89, [figure 3-27](#)) to increase or decrease slack as required.

11. Close kit and attach the 5-pound weight to the cable coupling. Check slack in accordance with [step 7](#).

CAUTION

Ensure that SKU-2/A oxygen outlet port to aircrewmember is either capped or the Hose Assembly (NAVAIR 13-1-6.3-1) is installed.

12. Actuate reducer by pulling downward on cable coupling. Reducer shall trip to "ON" position followed by disconnection of coupling.

WARNING

When resetting reducer toggle ensure toggle is in the vertical (cocked) position and ensure cables and cable balls are not wrapped around reducer toggle and jammed against the inside of the kit lid.

13. Open kit, reset pressure reducer toggle and ensure toggle is in the vertical (cocked) position and cables and cable balls are not wrapped around reducer toggle and jammed against the inside of the kit lid. Connect coupling.

14. Tighten clamp (83, [figure 3-27](#)).

15. Tighten nuts (91 and 92, [figure 3-27](#)).

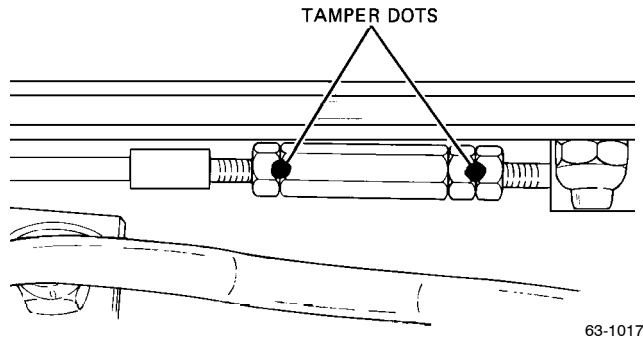
16. Repeat [steps 12 and 13](#).

17. Close kit and attach 5-pound weight to cable coupling. Check slack in accordance with [step 7](#).

NOTE

Use any contrasting color when applying tamper dots to oxygen fittings.

18. Open kit and apply lacquer (MIL-L-7178) tamper dots on nuts and barrel.



Step 18 - Para 3-66

19. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

3-67. ADJUSTMENT OF RELIEF VALVE. If the relief valve fails to unseat within the 120 to 140 psi tolerance, proceed to adjust the valve as follows:

NOTE

Either of two types of relief valves may be used, an adjustable cap type or an adjustable three-prong pressure nut type ([figure 3-17](#)).

Support Equipment Required

| Quantity | Description | Reference Number |
|----------|--|--|
| 1 | Cap Adjustable Relief Valve Adjustment Tool | Fabricate IAW paragraph 3-78 |
| 1 | Pressure-Nut Adjustable Relief Valve Adjustment Tool | Fabricate IAW paragraph 3-78 |

1. Bleed pressure to zero and remove relief valve.

NOTE

Turn in incremental adjustments of 1/2 ± 1/4 turns.

2. Adjust the valves unseating pressure by turning the cap or pressure nut clockwise to increase relief valve pressure and counterclockwise to decrease ([figure 3-17](#)).

3. Install oxygen relief valve.

4. Perform functional check in accordance with [paragraph 3-39](#).

Section 3-7. Fabrication

3-68. GENERAL.

3-69. This section contains instructions for fabrication of tools and components that can be manufactured by local maintenance activities.

3-70. TOGGLE RESET TOOL. To fabricate a toggle reset tool, proceed as follows:

1. Modify a standard slot screwdriver in accordance with [figure 3-18](#).

3-71. DROPLINE. To fabricate a dropline, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|---|--------------------------------|
| As Required | Webbing, 3/4-Inch Yellow | MIL-W-5625 NIIN 00-753-6531 |
| As Required | Thread, Nylon, Type I, Class A, Size FF, Color: White | V-T-295 NIIN 00-267-3024 |

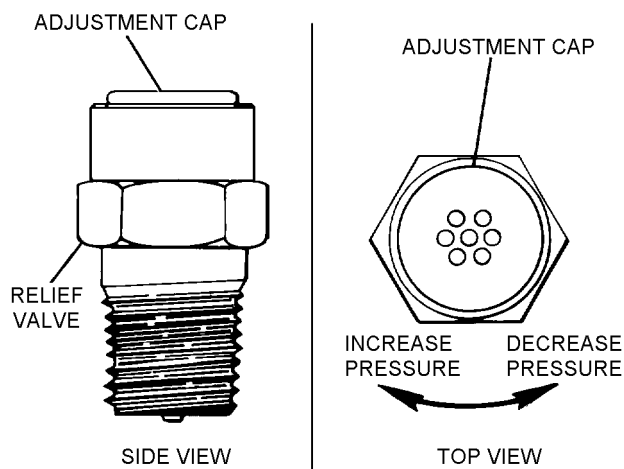
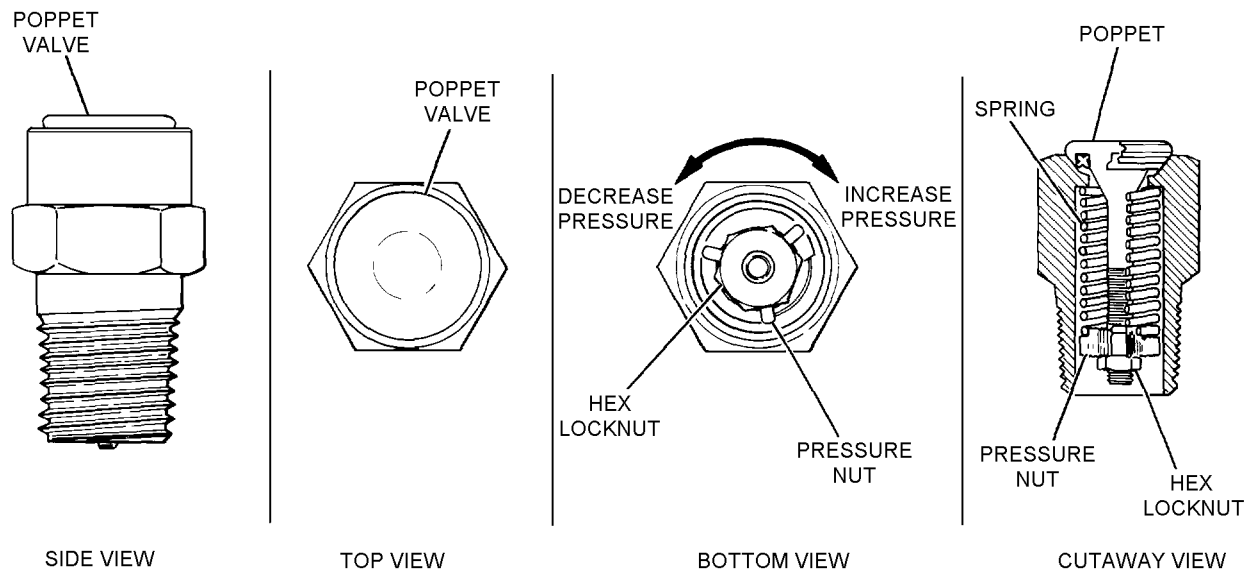


Figure 3-17. Adjustable Relief Valves

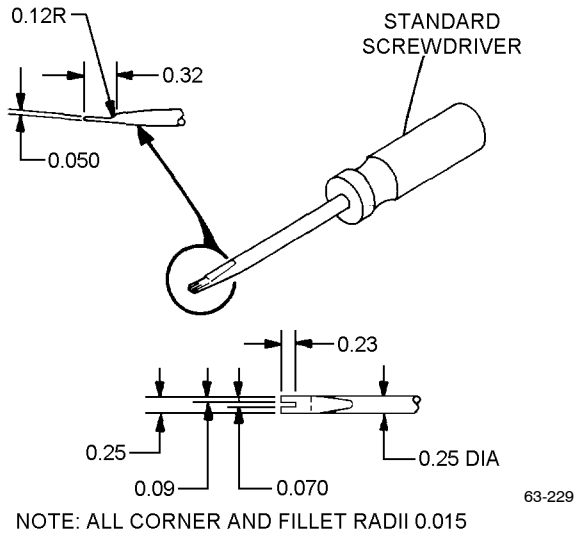
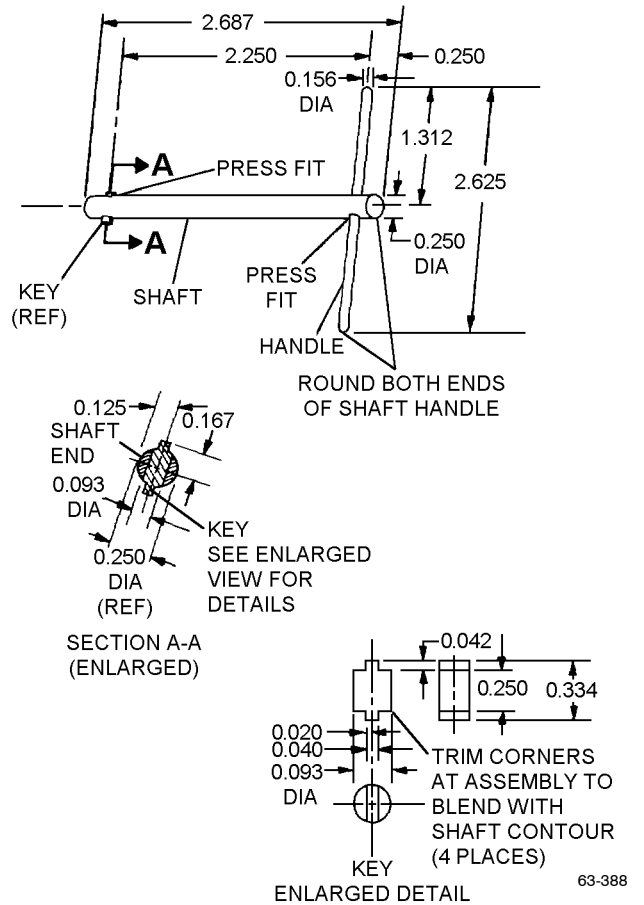


Figure 3-18. Toggle Reset Tool

1. Lay out webbing and position identification yarn on top before proceeding.
2. Construct a dropline in accordance with [figure 3-19](#).
3. Sear exposed ends of webbing.
4. All stitching shall be ASTM-D-6193, Type 301, 8 to 10 stitches per inch, and backstitch 1/2 inch minimum.

3-72. T-WRENCH. To fabricate a T-wrench, proceed as follows:

1. Fabricate wrench from steel as shown.



Step 1 - Para 3-72

3-73. BOOT. To fabricate a boot, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|--|-----------------------------|
| As Required | Nylon | MIL-C-8135 or MIL-C-81395 |
| As Required | Thread, Nylon, Type I, Class A, Size FF, White | V-T-295 NIIN 00-267-3024 |

1. Construct a boot in accordance with [figure 3-20](#).

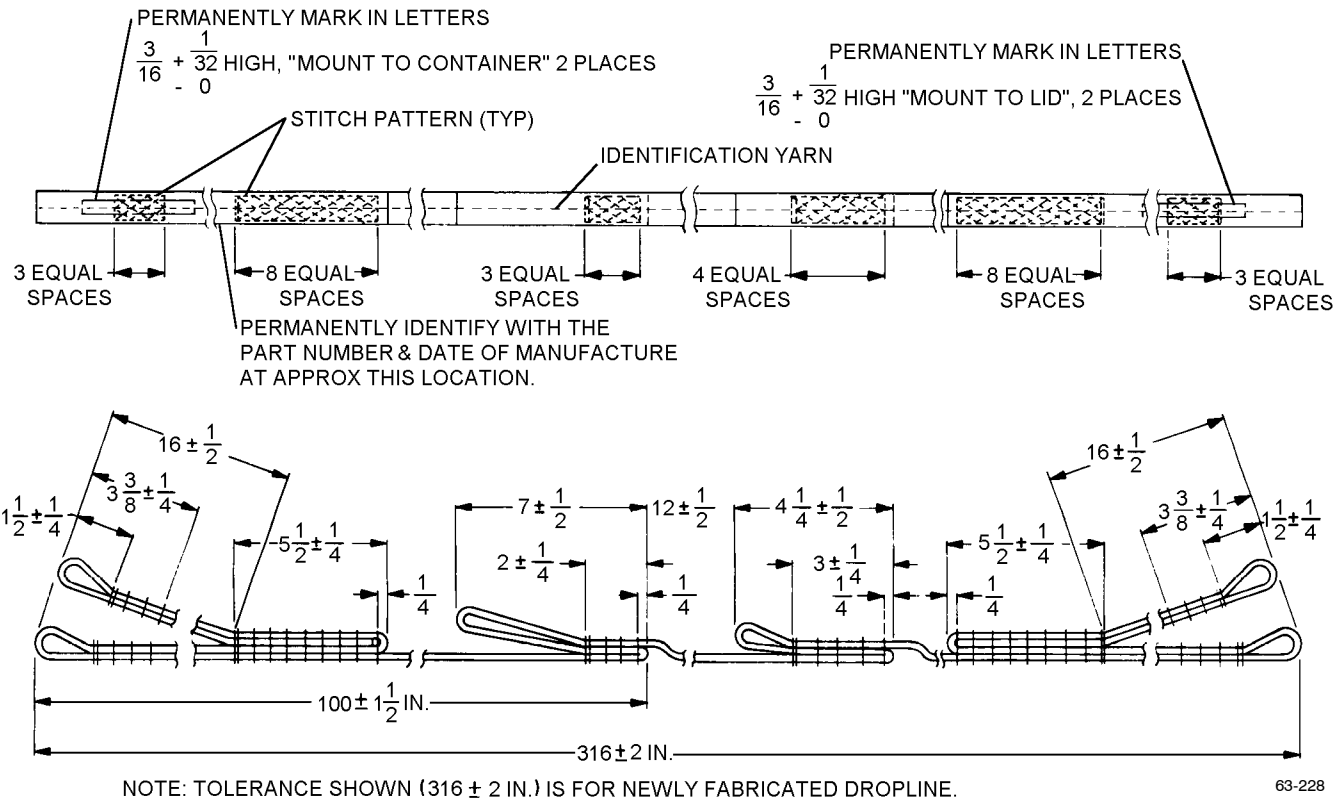


Figure 3-19. Dropline

2. Sear exposed ends of edges.
3. All stitching shall be ASTM-D-6193, Type 301, 8 to 10 stitches per inch, and backstitch 1/2 inch minimum.

3-74. LIFERAFT PACKING AID. To fabricate a life-raft packing aid, proceed as follows:

1. Fabricate packing aid as shown in figure 3-21.

3-75. AUTOMATIC EMERGENCY OXYGEN ACTUATION CABLE ADJUSTMENT GAGE. To fabricate an automatic emergency oxygen actuation cable adjustment gage, proceed as follows:

Materials Required

| Quantity | Description | Reference Number |
|-------------|-------------------------------|----------------------|
| As Required | Aluminum Sheet 1/8-inch Thick | 7075T6 or Equivalent |

1. Cut a 2-inch x 2-inch piece from a 1/8-inch thick aluminum sheet stock (figure 3-22).

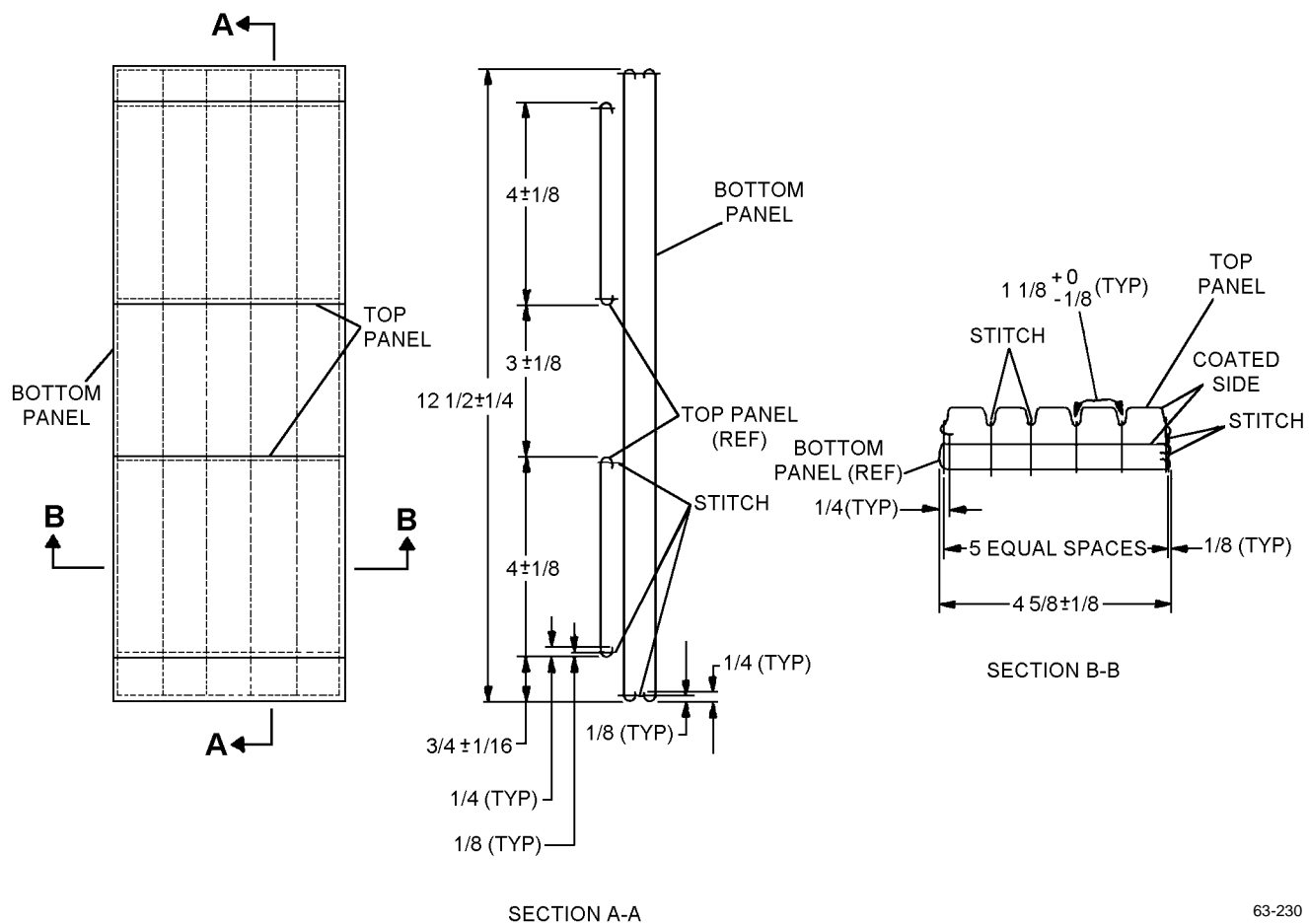
2. Mill a 3/8-inch wide x 1/2-inch long slot perpendicular to one side of the cut piece.

3-76. BRAKE RIDER'S STRAP. To fabricate a brake rider's strap, proceed as follows:

Materials Required

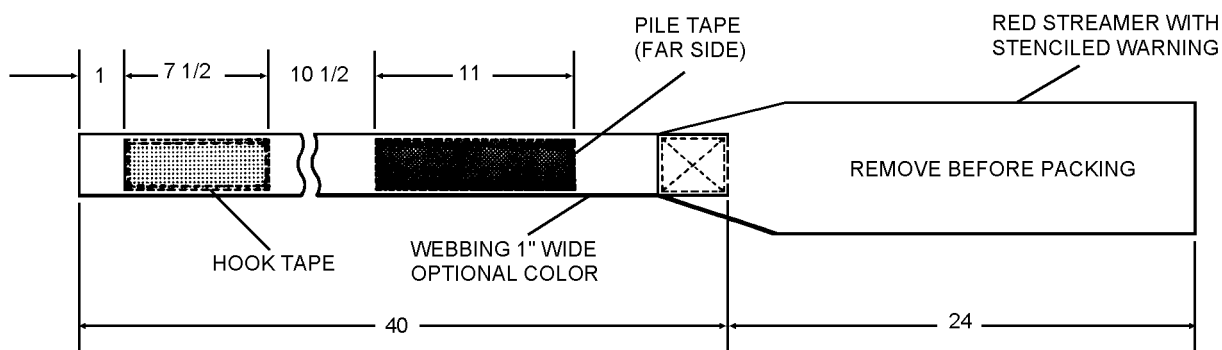
| Quantity | Description | Reference Number |
|-------------|---|-----------------------------|
| 2 | Release Assembly Lapbelt Fitting | 015-11366-1 (CAGE 99449) |
| 24 Inches | Webbing, Nylon, Type XXVII, 1 23/32 Inches Wide | MIL-W-4088 NIIN 00-530-1489 |
| As Required | Thread, Nylon, Type II, Class A, Size 6 | V-T-295 NIIN 00-559-5211 |

1. Cut a piece of nylon webbing 24 inches in length.



63-230

Figure 3-20. Boot



NOTES:

1. PILE TAPE AND HOOK TAPE ARE ON OPPOSITE SIDES OF WEBBING.
2. STREAMER WITH STENCILED WARNING MUST BE MADE WITH RED MATERIAL.

63-534

Figure 3-21. Liferaft Packing Aid

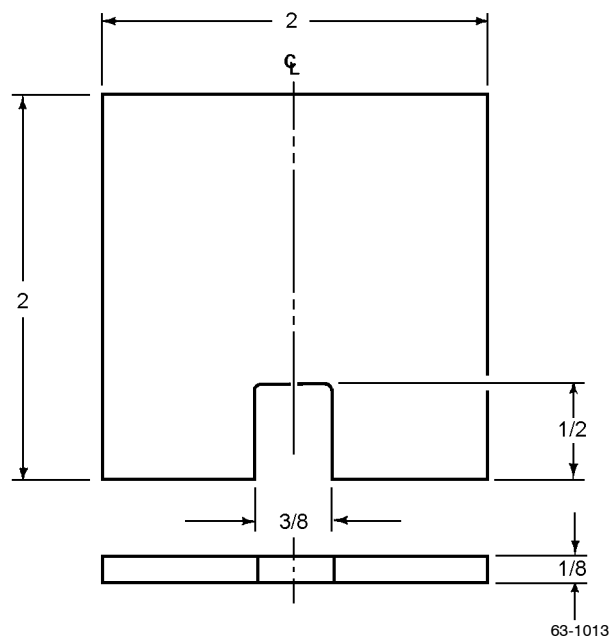
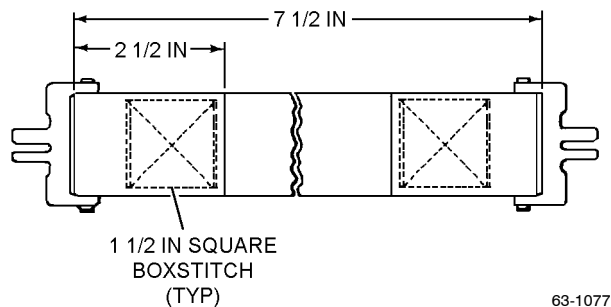


Figure 3-22. Automatic Emergency Oxygen Actuation Cable Adjustment Gauge

2. Sear exposed ends of webbing.
3. Secure fittings with 1 1/2-inch square box-stitch. All stitching shall be ASTM-D-6193, Type 301, 4 to 6 stitches per inch, and backstitch 1/2 inch minimum.



Step 3 - Para 3-76

3-77. CONTAINER ASSEMBLY PAD. To fabricate a container assembly pad, P/N 221D460-11, proceed as follows:

| Materials Required | | |
|--------------------|------------------------------|------------------|
| Quantity | Description | Reference Number |
| 1 | Cork Sheet, 0.062-Inch Thick | MIL-T-6841 |

3-80 Change 5

1. Fabricate a container assembly pad in accordance with figure 3-23.
2. Rubber stamp part number on container assembly pad.

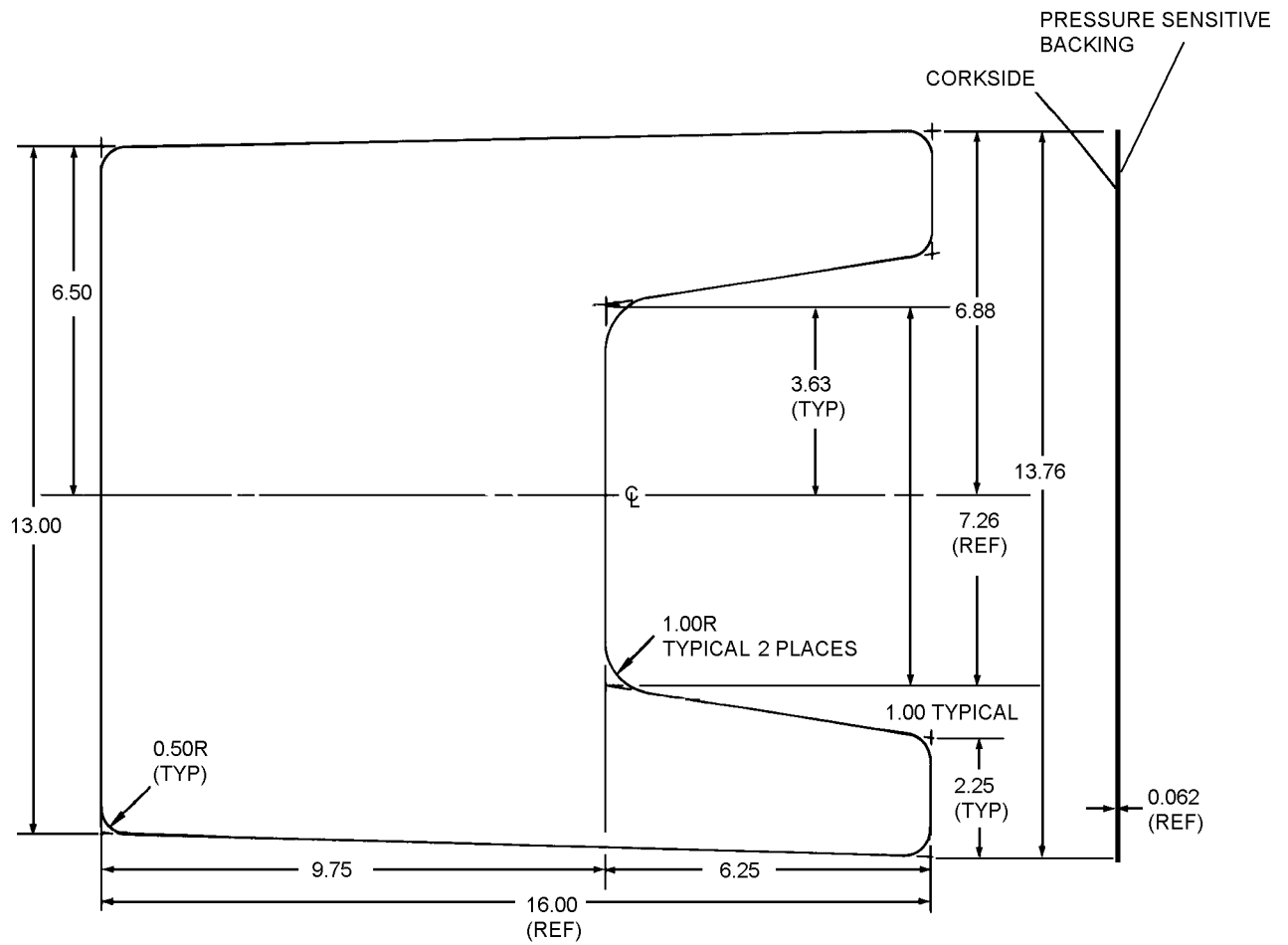
3-78. RELIEF VALVE ADJUSTMENT TOOL. To fabricate a relief valve adjustment tool, proceed as follows:

| Materials Required | | |
|--------------------|----------------------------------|------------------|
| Quantity | Description | Reference Number |
| As Required | Mild Steel or Brass, 0.125 Thick | — |
| As Required | Drill Rod, 0.062 Dia. | — |
| As Required | Drill Rod, 0.25 Dia. | — |

1. Depending upon which type relief valve is being used, fabricate the correct adjustment tool in accordance with figure 3-24.
2. Press fit the pins into the holes on the plate when fabricating the cap adjustable relief valve.

3-79. (F-14A) ACTUATION LANYARD (AN/URT-33 RADIO BEACON). To fabricate an actuation lanyard P/N A51D60016-5, proceed as follows:

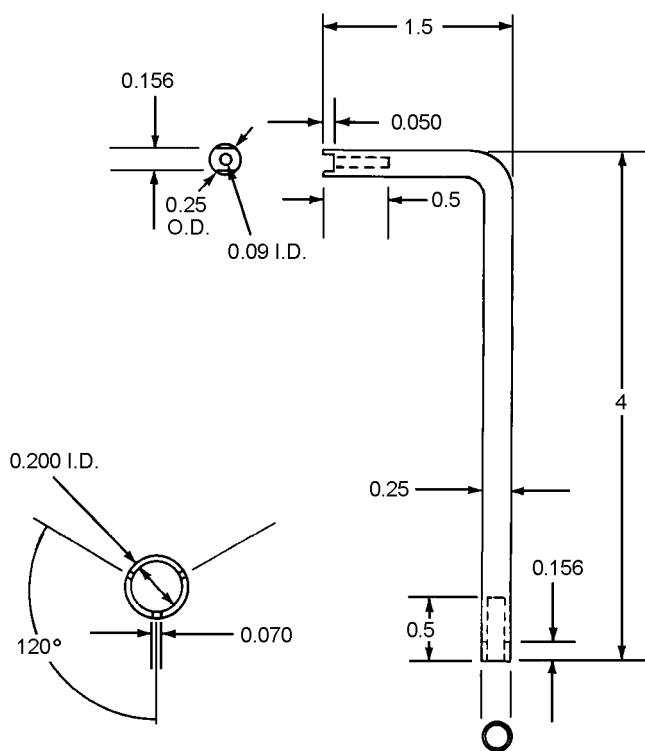
| Materials Required | | |
|--------------------|--------------------------------|----------------------------|
| Quantity | Description | Reference Number |
| As Required | 0.06 dia. Plastic Coated Cable | GL10B (CAGE 26512) |
| 1 | Snaphook | MIL-S-43770-12A-MIZEI |
| 2 | Sleeve, Swaging | 18-11B4 (CAGE 76691) (TYP) |



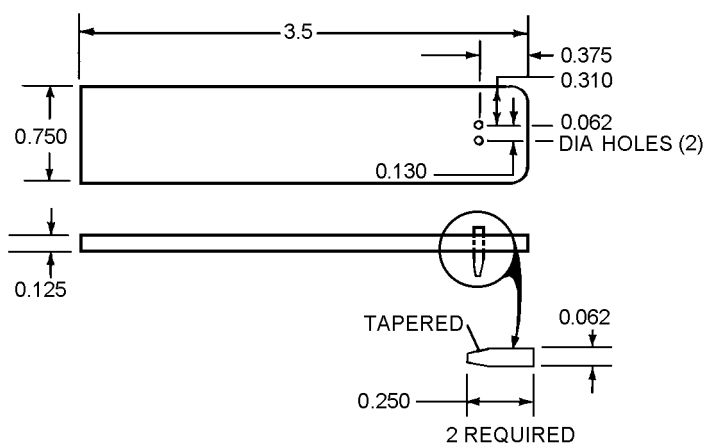
NOTES:
TOLERANCES ARE:
X.XX = ± 0.01
X.XXX = ± 0.005

63-3051

Figure 3-23. Container Assembly Pad



THREE PRONG PRESSURE NUT ADJUSTABLE TYPE

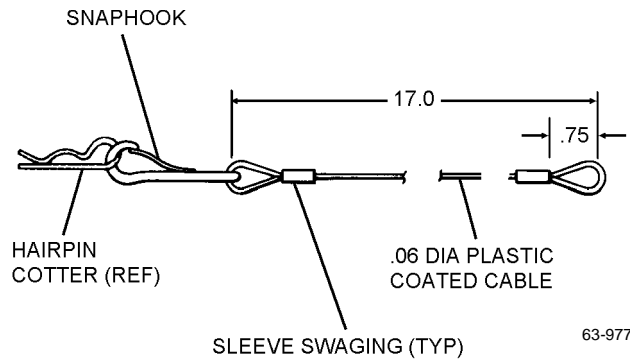


CAP ADJUSTABLE TYPE

Figure 3-24. Relief Valve Adjustment Tools

63-3053

1. Fabricate actuation lanyard from 0.06 dia. plastic coated cable wire as shown.



Step 1 - Para 3-79

3-80. (EA-6B AIRCRAFT) ACTUATION LANYARD (AN/URT-33 RADIO BEACON). To fabricate an actuation lanyard P/N 128ES10230-3, proceed as follows:

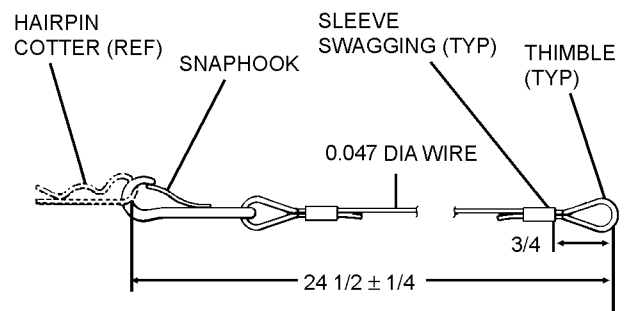
Materials Required

| Quantity | Description | Reference Number |
|-------------|--|------------------------|
| As Required | 0.047 dia. Wire with Teflon Cover 0.062 O.D. | GL10B2-27 (CAGE 26512) |
| 2 | Sleeve, Swaging | GS10C2 (CAGE 26512) |

Materials Required (Cont)

| Quantity | Description | Reference Number |
|----------|--|-----------------------|
| 1 | Snaphook | MIL-S-43770-12A-MIZEI |
| 2 | Thimble, Wire Cable, Corrosion Resistant Steel | AN10C-3 |

1. Fabricate actuation lanyard from 0.047 dia. wire as shown.



NOTE: WIRE BREAKING STRENGTH 270 lbs.

Step 1 - Para 3-80

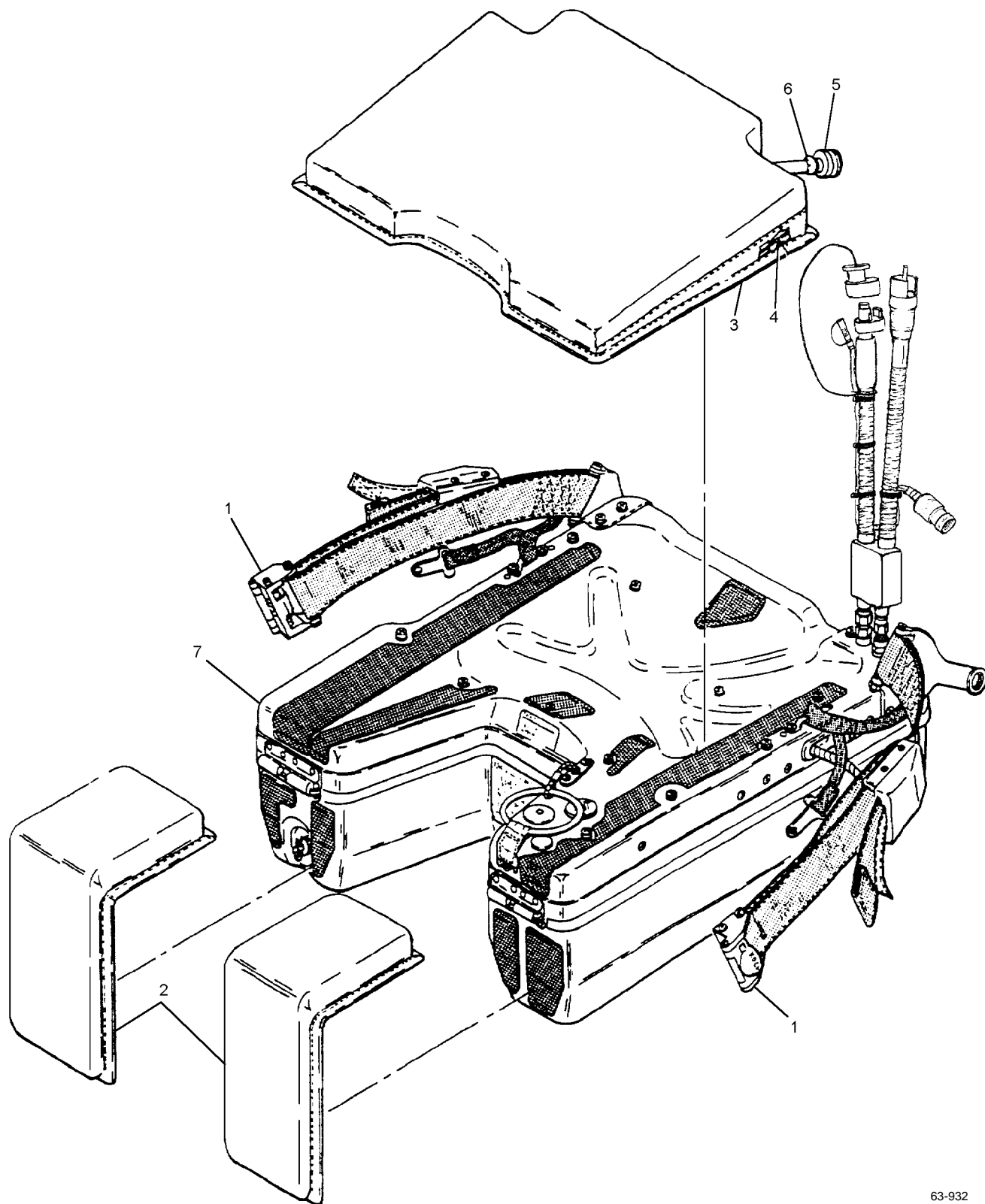
Section 3-8. Illustrated Parts Breakdown

3-81. GENERAL.

3-82. This section lists and illustrates the assemblies and detail parts of the SKU-2/A survival kit assembly as manufactured by East/West Industries. The entire

assembly is supplied by Grumman Aerospace Corporation (CAGE 26512) and is P/N 128ES10065-13.

3-83. The Illustrated Parts Breakdown should be used during maintenance when requisitioning and identifying parts.



63-932

Figure 3-25. Survival Kit Assembly (SKU-2/A)

| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|----------------------------|--|--|-----------------------|-------------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-25 | 128ES10065-13 | SURVIVAL KIT ASSEMBLY, SKU-2/A (26512) | 1 | |
| | -1 015-11365-1 | . RELEASE ASSEMBLY, Lapbelt (99449) (Note 1) | 2 | |
| | -2 128ES10070-5 | . THIGH SUPPORT CUSHIONS (26512) | 2 | |
| | 128ES10070-1 | . THIGH SUPPORT CUSHIONS (26512) (Alternate for 128ES10070-5) | 2 | |
| | 128ES10060-7 | . CUSHION ASSEMBLY (26512) | 1 | |
| | 128ES10060-1 | . CUSHION ASSEMBLY (26512) (Alternate for 128ES10060-7) | 1 | |
| | -3 128ES10060-9 | . . COVER ASSEMBLY | 1 | |
| | 128ES10060-25 | . . CUSHION ASSEMBLY | 1 | |
| | -4 128ES10060-27 | . . . BLADDER ASSEMBLY | 1 | |
| | -5 128SCES115-13 | . . COUPLING | 1 | |
| | -6 NAS397-10 | . . CLAMP, Ratchet, one piece | 1 | |
| | -7 128SCES119-1 | . SURVIVAL KIT ASSEMBLY (26512) | 1 | |
| | 221J100-1 | . SURVIVAL KIT ASSEMBLY (30941) (See figure 3-26 for BKDN) | 1 | |
| | Notes: 1. When replacing lapbelt assembly, apply sealing, locking, and retaining compound, MIL-S-22473, to shoulder screws. | | | |

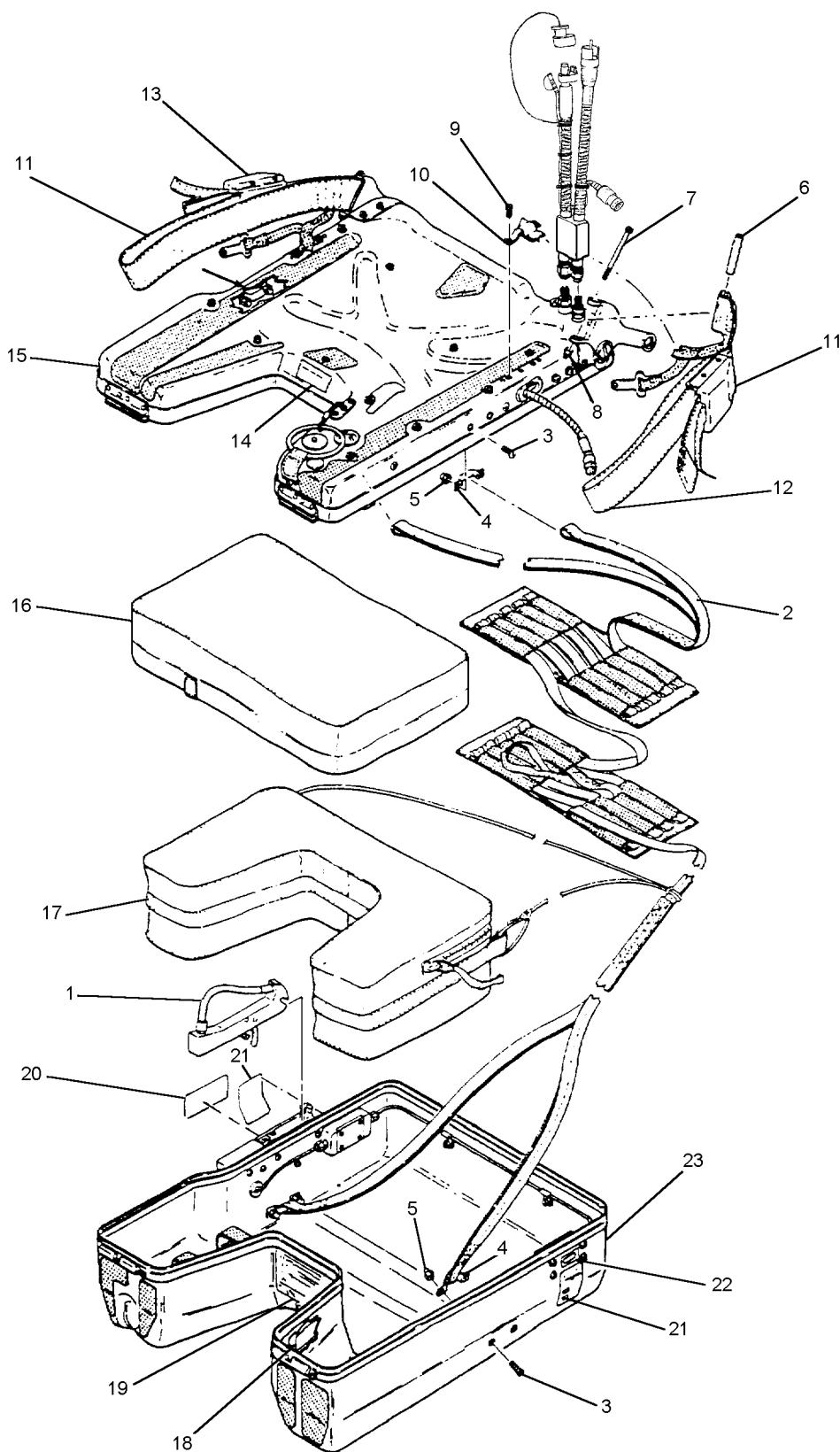
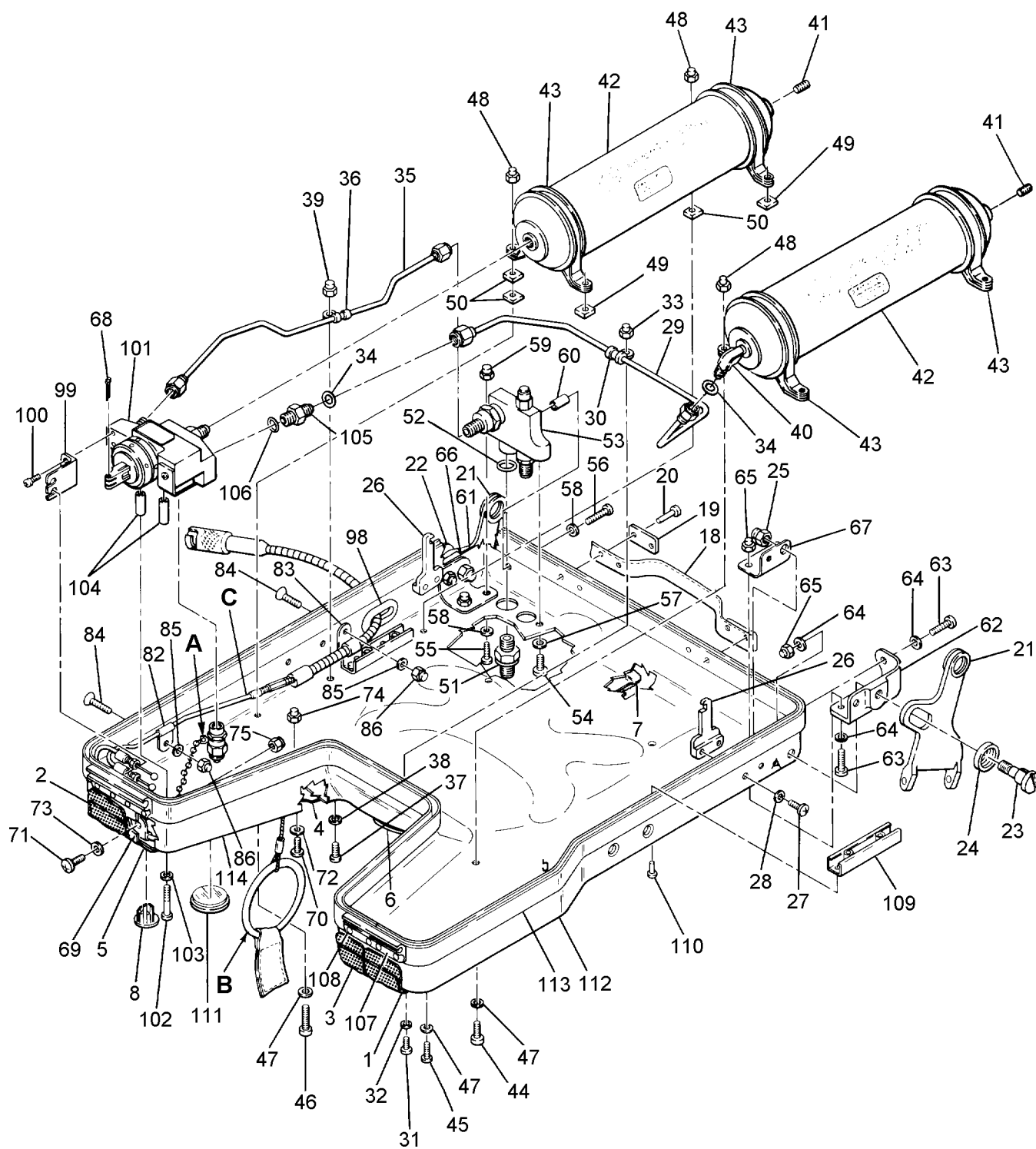


Figure 3-26. Survival Kit Assembly components (SKU-2/A)

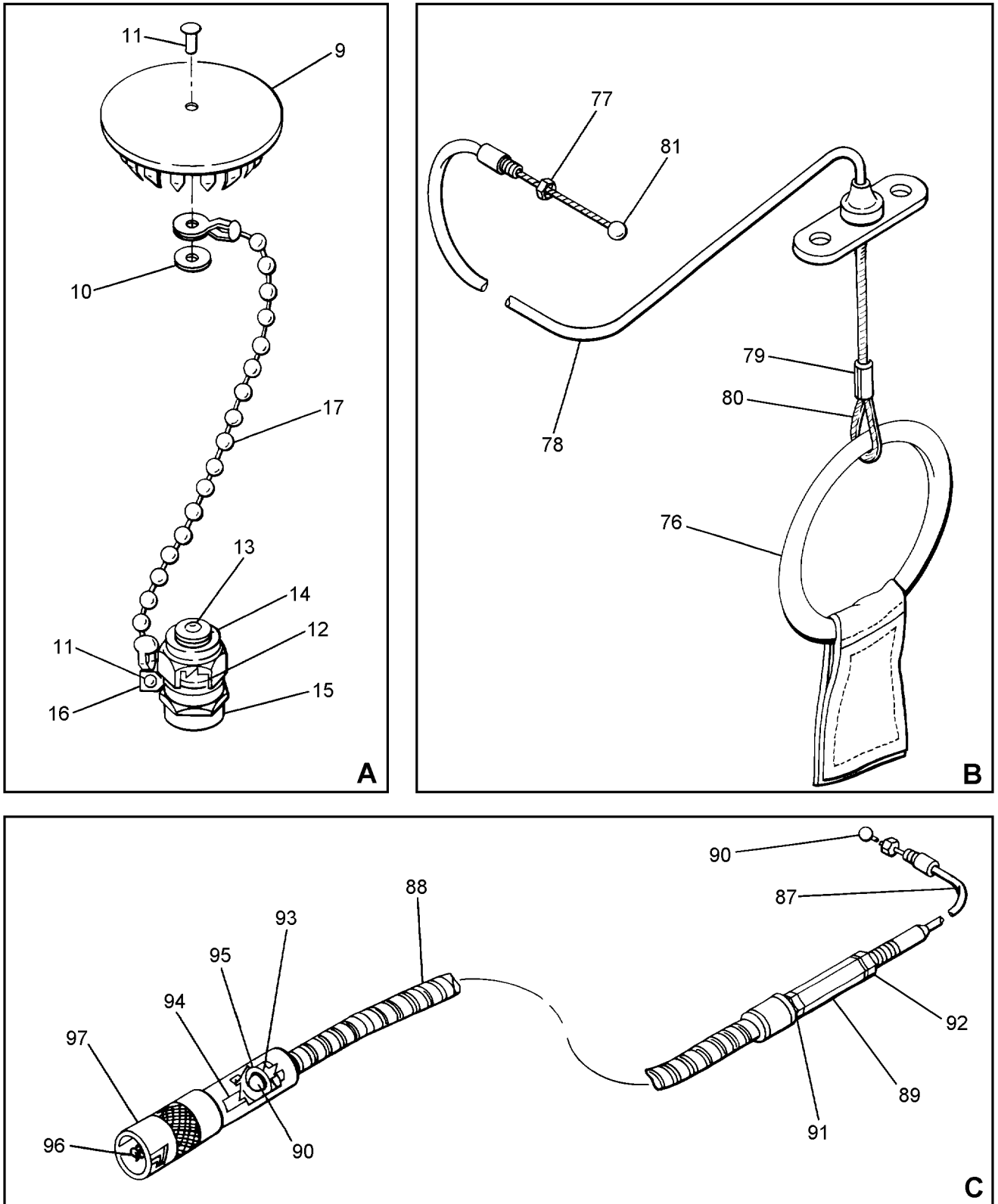
63-933A

| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | | | |
| 3-26 | 221J100-1 | SURVIVAL KIT ASSEMBLY (See figure 3-25 for NHA) | REF | |
| -1 | 102D550-3 | . HANDLE ASSEMBLY, Release | 1 | |
| -2 | 102D620-5 | . LANYARD ASSEMBLY, Retaining (30941) (ATTACHING PARTS) | 1 | |
| -3 | MS51960-64 | . SCREW, Machine flat hd. (10-32 x 0.44 lg.) | 8 | |
| -4 | 102C101-11 | . BRACKET, Footman | 4 | |
| -5 | 22K1-02 | . NUT, Cap (10-32) | 8 | |
| | | ---*--- | | |
| | 221D680-1 | . HARNESS ASSEMBLY, LH | 1 | |
| | 221D680-2 | . HARNESS ASSEMBLY, RH | 1 | |
| | | (ATTACHING PARTS) | | |
| -6 | 221B210-11 | . ROLLER, Harness retention | 2 | |
| -7 | 221B691-11 | . PIN, Harness retention | 2 | |
| -8 | 22K1-02 | . NUT, Cap (10-32) | 2 | |
| -9 | MS35207-262 | . SCREW, Machine, panhead (10-32 x 0.44 lg.) | 4 | |
| -10 | 102C101-13 | . BRACKET, Footman | 2 | |
| | | ---*--- | | |
| -11 | GA506D1 | . . ADJUSTER, Restraint harness (26512) | 1 | |
| | 184C100-1 | . . ADJUSTER, Restraint harness (30941) | 1 | |
| | | (Interchangeable with GA506D1 in pairs only) | | |
| -12 | 221D690-1 | . . HARNESS ASSEMBLY, LH | 1 | |
| -13 | 221D690-2 | . . HARNESS ASSEMBLY, RH | 1 | |
| -14 | 221C914-11 | . NAME PLATE, Lid | 1 | |
| -15 | 221J200-1 | . LID ASSEMBLY, | 1 | |
| | | (See figure 3-27 for BKDN) | | |
| -16 | 221D610-1 | . COVER, Raft | 1 | |
| -17 | 221D615-1 | . CONTAINER ASSEMBLY, Equipment | 1 | |
| -18 | 221C914-13 | . NAME PLATE, Container | 1 | |
| -19 | 221C913-11 | . NAME PLATE, SKU-2/A | 1 | |
| -20 | 102D499-17 | . LABEL, Warning | 1 | |
| -21 | 102D499-23 | . LABEL, Indicating | 2 | |
| -22 | NO. 850 | . TAPE, Mylar clear (1/2 inch) | A/R | |
| -23 | 221J400-1 | . CONTAINER ASSEMBLY, Lower, | 1 | |
| | | (See figure 3-30 for BKDN) | | |



63-9341A

Figure 3-27. Lid Assembly (Sheet 1 of 2)



63-9342A

Figure 3-27. Lid Assembly (Sheet 2 of 2)

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| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-27 | 221J200-1 | LID ASSEMBLY, (See figure 3-26 for NHA) | REF | |
| -1 | 221D230-11 | . TAPE, Fastener pile (Note 3) | 1 | |
| -2 | 221D230-13 | . TAPE, Fastener pile (Note 3) | 1 | |
| -3 | 221D230-15 | . TAPE, Fastener pile (Note 3) | 1 | |
| -4 | 221D230-17 | . TAPE, Fastener pile (Note 3) | 1 | |
| -5 | 221D230-19 | . TAPE, Fastener pile (Note 3) | 1 | |
| -6 | 221D230-21 | . TAPE, Fastener pile (Note 3) | 1 | |
| -7 | 221D230-23 | . TAPE, Fastener pile (Note 3) | 1 | |
| -8 | SS51338 | . PLUG (77132) | 1 | |
| | 221C280-1 | . PLUG AND CAP ASSEMBLY | 1 | |
| -9 | 221B281-11 | . . PLUG | 1 | |
| -10 | MS15795-802 | . . WASHER, Flat | 1 | |
| -11 | MS16535-89 | . . RIVET, Oval hd | 2 | |
| -12 | 102C381-11 | . . PIVOT | 1 | |
| -13 | COML | . . SCREW, Drive (4 x .25 type II) | 1 | |
| -14 | AN960-C4 | . . WASHER, Flat | 1 | |
| -15 | 221B382-11 | . . CAP | 1 | |
| -16 | 221B282-11 | . . STRAP | 1 | |
| -17 | 221C280-11 | . . CHAIN, Safety (3.50 ±.12 lg.) | 1 | |
| -18 | 221B710-11 | . HANDLE, Carrying | 1 | |
| -19 | 221B711-11 | . RETAINER, Handle | 2 | |
| | | (ATTACHING PARTS INDEX NOS. 18, 19) | | |
| -20 | MS20470AD4-8 | . RIVET, Solid universal hd. ---*--- | 4 | |
| -21 | 221C645-11 | . FITTING, Rear | 2 | |
| | | (ATTACHING PARTS) | | |
| -22 | 221B646-11 | . PIN, Rear attachment LH (1.25 in. lg.) | 1 | |
| -23 | 221B646-13 | . PIN, Rear attachment RH (1.42 in. lg.) | 1 | |
| -24 | 221B648-11 | . WASHER, Anti-Chafing | 2 | |
| -25 | 22K2-048 | . CAPNUT (1/4-28) (22599) | 2 | |
| | | ---*--- | | |
| -26 | 230C535-13 | . LATCH, Lid | 2 | |
| | | (ATTACHING PARTS) | | |
| -27 | MS35207-262 | . SCREW, Pan hd. (10-32 x 0.44 lg.) | 4 | |

| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | | | |
| 3-27-28 | AN960PD10L | . WASHER, Flat | 4 | |
| | | ---*--- | | |
| -29 | 221D354-1 | . TUBE ASSEMBLY | 1 | |
| | | (ATTACHING PARTS) | | |
| -30 | MS21919DG3 | . CLAMP, Cushioned support | 1 | |
| -31 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 1 | |
| -32 | AN960PD10L | . WASHER, Flat | 1 | |
| -33 | 22K2-02 | . CAPNUT (10-32) (22599) | 1 | |
| | | ---*--- | | |
| -34 | EW60001 | . WASHER, Conical flare | 2 | |
| | VSF1015S3 | . WASHER, Conical flare (92215) | 2 | |
| -35 | 221D355-1 | . TUBE ASSEMBLY | 1 | |
| | | (ATTACHING PARTS) | | |
| -36 | MS21919DG4 | . CLAMP, Cushioned support | 1 | |
| -37 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 1 | |
| -38 | AN960PD10L | . WASHER, Flat | 1 | |
| -39 | 22K2-02 | . CAPNUT (10-32) (22599) | 1 | |
| | | ---*--- | | |
| -40 | MS20822-3C | . ELBOW, Flared tube and pipe thread | 1 | |
| -41 | AN932-S2 | . PLUG, Countersink hex hd. pipe | 2 | |
| -42 | 235D200-1 | . CYLINDER, Oxygen | 2 | |
| | | (ATTACHING PARTS) | | |
| -43 | NAS1716C40T | . CLAMP ASSEMBLY, Cushioned saddle | 4 | |
| -44 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 4 | |
| -45 | MS35207-265 | . SCREW, Pan hd. (10-32 x 0.75 lg.) | 2 | |
| -46 | MS35207-266 | . SCREW, Pan hd. (10-32 x 0.88 lg.) | 2 | |
| -47 | AN960PD10L | . WASHER, Flat | 8 | |
| -48 | 22K2-02 | . CAPNUT (10-32) (22599) | 8 | |
| | | ---*--- | | |
| -49 | 221B322-11 | . SPACER | 2 | |
| -50 | 221B322-13 | . SPACER | 3 | |
| -51 | 2624A-4TT | . CHECK VALVE (91816) (Note 7) | 1 | |
| -52 | MS9068-011 | . O-RING | 1 | |

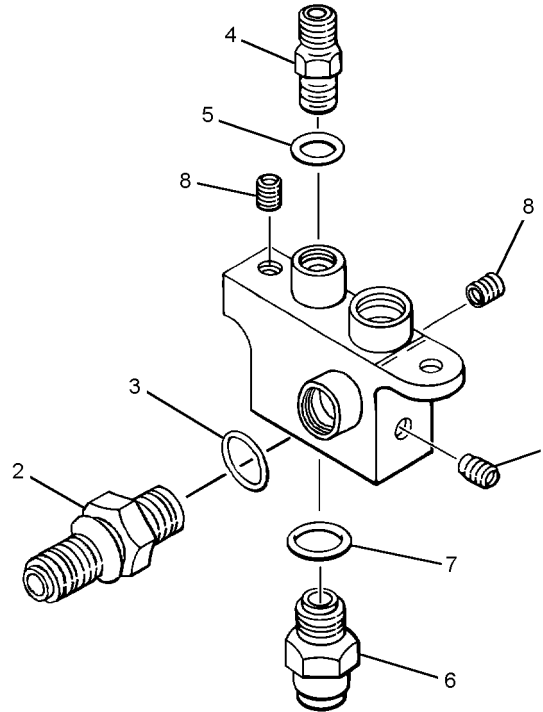
NAVAIR 13-1-6.3-2

| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|----------------------------|----------------|---|-----------------------|-------------------|
| 3-27-53 | 221D317-1 | . MANIFOLD ASSEMBLY, (See figure 3-28 for BKDN) (ATTACHING PARTS) | 1 | |
| -54 | MS35207-262 | . SCREW, Pan hd. (10-32 x 0.44 lg.) | 1 | |
| -55 | MS35207-264 | . SCREW, Pan hd. | 1 | |
| -56 | MS35207-266 | . SCREW, Pan hd. (10-32 x 0.88 lg.) | 1 | |
| -57 | AN960PD10 | . WASHER, Flat | 1 | |
| -58 | AN960PD10L | . WASHER, Flat | 2 | |
| -59 | 22K2-02 | CAPNUT (10-32) (22599) ---*--- | 1 | |
| -60 | 221B321-11 | . STANDOFF | 1 | |
| -61 | 221C640-11 | . BRACKET, Rear LH | 1 | |
| -62 | 221C642-11 | . BRACKET, Rear RH | 1 | |
| | | (ATTACHING PARTS FOR INDEX NOS. 61 and 62) | | |
| -63 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 7 | |
| -64 | AN960PD10L | . WASHER, Flat | 9 | |
| -65 | 22K2-02 | . CAPNUT (10-32) (22599) ---*--- | 7 | |
| -66 | 221C241-11 | . PLATE, Back-up LH | 1 | |
| -67 | 221C242-11 | . PLATE, Back-up RH | 1 | |
| | 221D345-1 | . RELEASE ASSEMBLY, O ₂ manual | 1 | |
| | | (ATTACHING PARTS) | | |
| -68 | MS24665-88 | . PIN, Cotter (Note 4) | 1 | |
| -69 | MS25281-F2 | . CLAMP, Loop-plastic | 1 | |
| -70 | MS35206-244 | . SCREW, Pan hd. | 2 | |
| -71 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 1 | |
| -72 | AN960PD8L | . WASHER, Flat | 2 | |
| -73 | AN960PD10L | . WASHER, Flat | 1 | |
| -74 | 22K1-82 | . NUT | 2 | |
| -75 | 22K2-02 | . CAPNUT (10-32) (22599) ---*--- | 1 | |
| -76 | 220C102-1 | . . RING, Release assembly | 1 | |
| -77 | 221B363-13 | . . NUT | 1 | |
| -78 | 221D349-1 | . . CONDUIT ASSEMBLY | 1 | |
| -79 | EW54006 | . . SLEEVE, Oval | 1 | |
| -80 | 220B116-17 | . . LOOP | 1 | |

| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-27-81 | EW54002 | . . BALL, Plain | 1 | |
| | 221D390-1 | . RELEASE ASSEMBLY, O ₂ automatic (ATTACHING PARTS) | 1 | |
| -82 | MS25281-F2 | . CLAMP, Loop plastic | 1 | |
| -83 | MS21919DG4 | . CLAMP, Cushioned support | 1 | |
| -84 | MS35207-263 | . SCREW, Pan hd. (10-32 x 0.50 lg.) | 2 | |
| -85 | AN960PD10L | . WASHER, Flat | 2 | |
| -86 | 22K2-02 | . CAPNUT (10-32) (22599) ---*--- | 2 | |
| -87 | 221C395-1 | . . CONDUIT ASSEMBLY, Rigid | 1 | |
| -88 | 221C396-1 | . . CONDUIT ASSEMBLY, Flexible | 1 | |
| -89 | 221C397-11 | . . BARREL | 1 | |
| -90 | RA2487-2 | . . BALL, Plain | 2 | |
| -91 | 221B363-11 | . . NUT | 1 | |
| -92 | 221B363-13 | . . NUT | 2 | |
| -93 | 221B365-11 | . . LINK | 1 | |
| -94 | COML | . □ □ TAPE, □ Pressure □ sensitive (□ Note 3 □) | A/R | |
| -95 | NO. 8751 | . □ □ EPOXY (□ Note 5 □) | A/R | |
| | 221C361-1 | . . COUPLING ASSEMBLY | 1 | |
| -96 | LC026BC-6 | . . SPRING | 1 | |
| -97 | 221C362-11 | . . COUPLING | 1 | |
| -98 | MS35489-42 | . GROMMET, Rubber | 1 | |
| -99 | 221C860-11 | . BRACKET, O ₂ release (ATTACHING PARTS) | 1 | |
| -100 | MS35206-215 | . SCREW, Pan hd. (4-40 x 0.38 lg.) ---*--- | 2 | |
| -101 | 216D800-3 | . REDUCER ASSEMBLY (See Figure 3-29 for BKN) | 1 | |
| | 216D800-7 | . REDUCER ASSEMBLY (See Figure 3-29 for BKN) (ATTACHING PARTS) | 1 | |
| -102 | MS35207-267 | . SCREW, Pan hd. (10-32 x 1.0 lg.) | 2 | |
| -103 | AN960PD10L | . WASHER, Flat ---*--- | 2 | |
| -104 | 221B321-13 | . STANDOFF | 2 | |
| -105 | MS21900-J3 | . ADAPTER | 1 | |
| -106 | MS9068-011 | . O-RING | 1 | |

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| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|----------------------------|----------------|---|-----------------------|-------------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-27-107 | 102D125-5 | . HINGE ASSEMBLY (ATTACHING PARTS) | 2 | |
| -108 | MS20470AD3-8 | . RIVET, Solid universal hd. ---*--- | 8 | |
| -109 | 102C281-11 | . BACK PLATE | 2 | |
| -110 | MS20470AD3-5 | . RIVET, Solid universal hd. | 6 | |
| -111 | 204B201-11 | . WINDOW, Gage | 1 | |
| | 221J222-1 | . LID ASSEMBLY, Machined | 1 | |
| | 221D220-1 | . . LID ASSEMBLY, Bonded | 1 | |
| -112 | 221J221-1 | . . . LID, Moulded | 1 | |
| -113 | 221D110-11 | . . . SEALER, Rear lid | 1 | |
| -114 | 221D110-15 | . . . SEALER, Front lid | 1 | |
| Notes: | | 1. Kits supplied by East/West Industries less Koch fittings, and cushion assemblies. 2. Order from 3M Co., Minnesota or equivalent. 3. Bond to lid using #12 Super-Bonder or equivalent. Wipe area clean with Heptane Prior to bonding (allow to dry). 4. Install cotter pin in accordance with MS33540. 5. Tape to be per PPP-T-66 Type I, CL-I suggested source of supply transparent plastic film No. 471 3/8 wide as manufactured by 3M Co., Minnesota. 6. Epoxy 221B365-II Link and RA2487-2 plain ball together as shown with epoxy lite No. 8751 or equivalent. 7. Torque check valve to a value of 70 \pm 5 in-lbs. | | |



63-935

Figure 3-28. Manifold Assembly

| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|-------------------------|--------------|--|--------------------|----------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-28 | 221D317-1 | MANIFOLD ASSEMBLY, (See figure 3-27 for NHA) | REF | |
| -1 | AN932-S1 | . PLUG, Countersink hex hd. pipe (Note 1) | 1 | |
| -2 | 3104AS100-1 | . CHECK VALVE (Note 3) | 1 | |
| -3 | MS9068-012 | . O-RING | 1 | |
| -4 | 221B320-11 | . NIPPLE, Union manifold | 1 | |
| -5 | MS9068-11 | . O-RING | 1 | |
| -6 | EW63004 | . RELIEF VALVE (30941) | 1 | |
| | P103-673 | . RELIEF VALVE (91816) | 1 | |
| | Z02RV04-4 | . RELIEF VALVE (91816) (Note 3) | 1 | |
| -7 | MS9068-012 | . O-RING | 1 | |
| -8 | MS21209F1-15 | . HELICAL COIL INSERT (Note 2) | 2 | |
| -9 | 221D319-11 | . MANIFOLD BODY | 1 | |
| Notes: | | 1. Install using MIL-T-27730 Teflon Tape. 2. Install Heli-coil insert per MS33537 or equivalent. 3. Torque to a value of 70 ± 5 in-lb. | | |

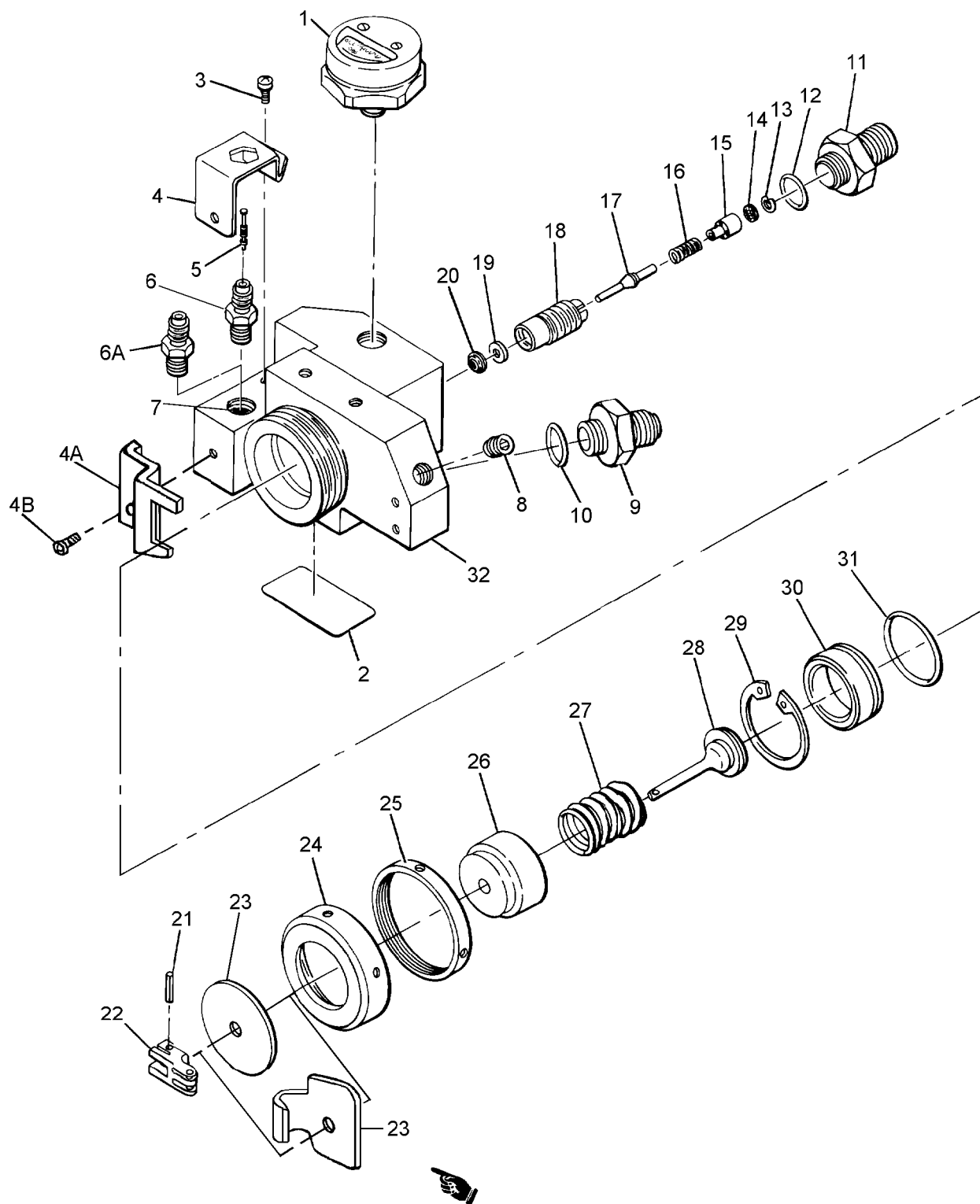
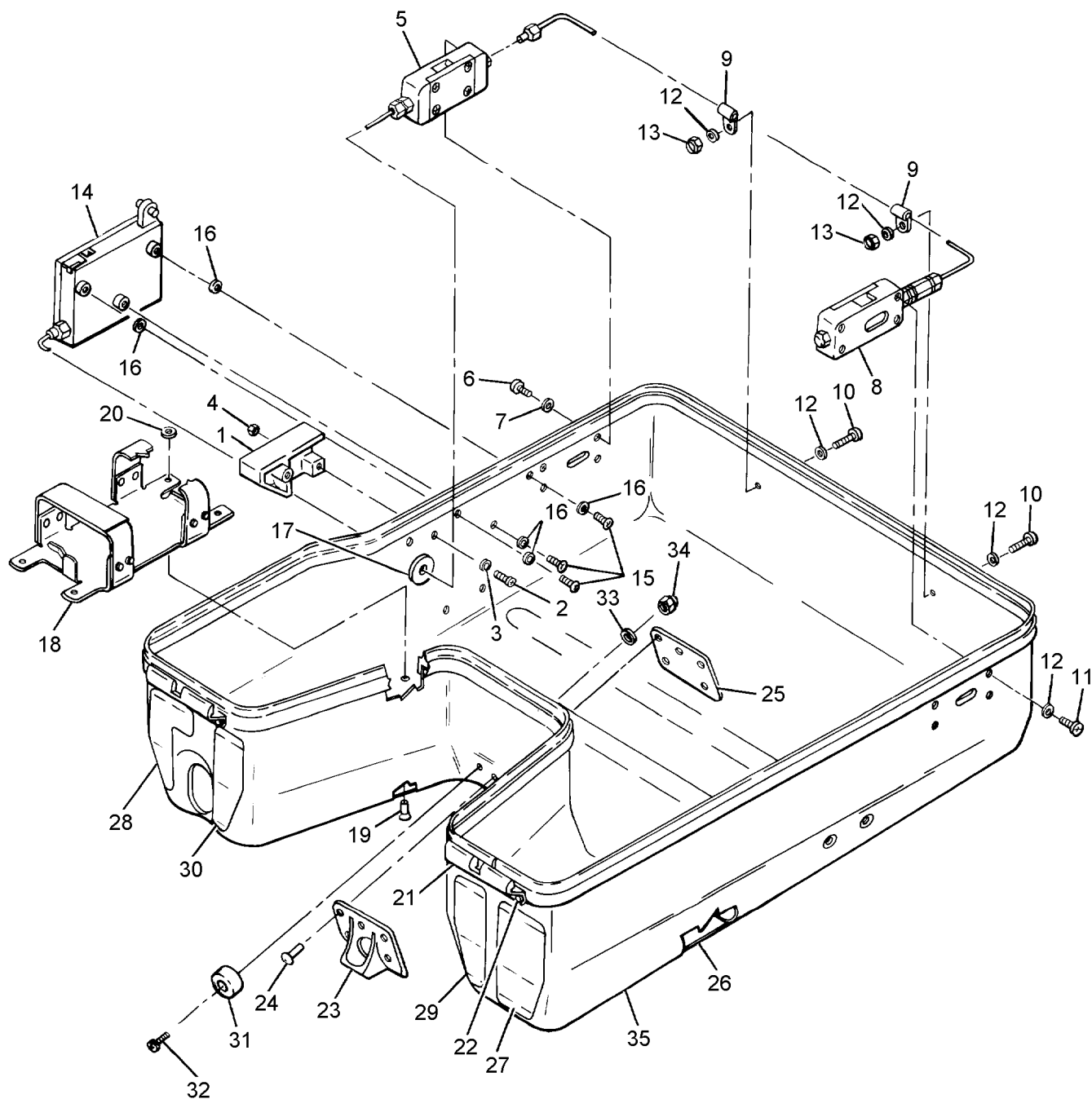


Figure 3-29. Reducer Assembly

003029

| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | | | |
| 3-29 | 216D800-3 | REDUCER ASSEMBLY (See Figure 3-27 for NHA) | REF | A |
| | 216D800-7 | REDUCER ASSEMBLY (See Figure 3-27 for NHA) (Note 4) | REF | B |
| -1 | MIL-G-7601A | . OXYGEN GAGE TYPE 1-2 (Note 1) | 1 | |
| -2 | 216B826-13 | . PLATE IDENTIFICATION | 1 | A |
| | 216B826-17 | . PLATE IDENTIFICATION | 1 | B |
| -3 | MS35206-225 | . SCREW, Mach pan hd. | 2 | |
| -4 | 221C870-11 | . RETAINER | 1 | |
| -4A | 221B343-11 | . BRACKET, Anti-rotation | 1 | |
| -4B | MS51957-26 | . SCREW | 1 | |
| | 221B380-1 | . VALVE ASSEMBLY, Filler (Note 1) | 1 | |
| -5 | EW63001 | . VALVE CORE (30941) | 1 | |
| -6 | 102C383-11 | . BODY VALVE | 1 | |
| -6A | 9120097-27 | . FILL VALVE (Note 5) | 1 | |
| -7 | 204B419-11 | . FILTER | 1 | |
| -8 | AN932-S1 | . PLUG, Countersink Hex Hd. pipe (Note 1) | 1 | |
| -9 | MS21900-J4 | . ADAPTER | 1 | |
| -10 | MS9068-012 | . O-RING | 1 | |
| -11 | 221B840-11 | . NIPPLE UNION | 1 | |
| -12 | MS9068-012 | . O-RING | 1 | |
| -13 | MS16625-4025 | . RING, Retaining | 1 | |
| -14 | 102B819-11 | . FILTER (Note 5) | 1 | |
| -15 | 102B818-11 | . GUIDE, Poppet | 1 | |
| -16 | 102B814-11 | . SPRING, Poppet | 1 | |
| -17 | 102B817-11 | . POPPET | 1 | |
| -18 | 102C815-11 | . RETAINER (Note 2) | 1 | |
| -19 | 102B828-11 | . STOP, Back up ring | 1 | |
| -20 | 102B816-11 | . SEAT | 1 | |
| -21 | MS171435 | . SPRING PIN | 1 | |
| -22 | 221C303-11 | . TOGGLE | 1 | |
| -23 | 233B823-11 | . SPACER | 1 | A |
| | 253D341-11 | . SPACER, Anti-cocking | 1 | B |
| -24 | 233C829-11 | . CAP, Adjust | 1 | |
| -25 | 233C830-11 | . LOCK RING | 1 | |
| -26 | 233C820-11 | . GUIDE, Piston | 1 | |
| -27 | 233B831-11 | . SPRING | 1 | |
| -28 | 102C824-11 | . PLUNGER | 1 | |
| -29 | N5000-102H | . RETAINING RING (79136) | 1 | |
| -30 | 102C821-11 | . PISTON | 1 | |
| -31 | MS28775-117 | . O-RING | 1 | |
| -32 | 216D811-11 | . REDUCER BODY | 1 | |

- Notes:
1. To assemble pipe threaded parts, use Teflon tape 1 1/2-in. wide conforming to MIL-T-27730, coating to be applied according to instructions specified in MIL-T-27730.
 2. Torque retainer to 32 to 35 inch-pounds after assembly.
 3. Install coarse mesh near side.
 4. Reducer assembly part number 216D800-7 incorporates an anti-rotation bracket.
 5. Fill Valve can be used as an alternate to replace Filler Valve Assembly P/N 221B380-1 or Valve Core P/N EW63001 and Body Valve P/N 102C383-11.



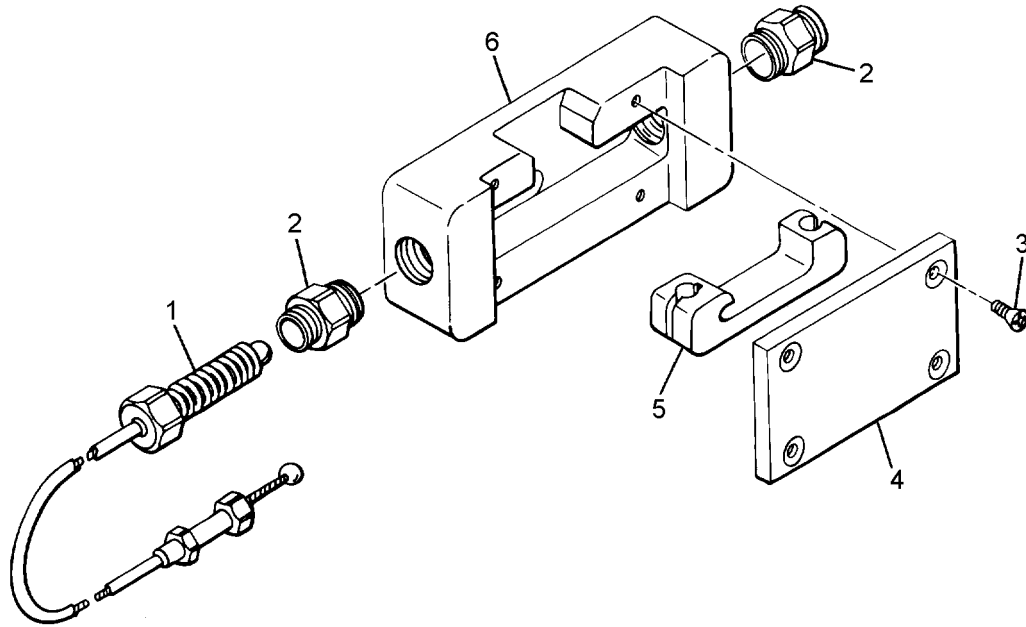
63-937

Figure 3-30. Lower Container Assembly

| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|----------------------------|----------------|--|-----------------------|-------------------|
| | | | | |
| 3-30 | 221J400-1 | CONTAINER ASSEMBLY, Lower (See figure 3-26 for NHA) | REF | |
| -1 | 234C450-11 | . HANDLE PROTECTOR (ATTACHING PARTS) | 1 | |
| -2 | MS35206-232 | . SCREW, Machine pan hd. | 2 | |
| -3 | AN960-6L | . WASHER, Flat | 2 | |
| -4 | MS21042-06 | . NUT, Self locking reduced hexagon hd. ---*--- | 2 | |
| -5 | 221C540-1 | . LOCK ASSEMBLY, RH (See figure 3-31 for BKDN) (ATTACHING PARTS) | 1 | |
| -6 | MS35207-262 | . SCREW, Machined pan hd. | 4 | |
| -7 | AN960PD10L | . WASHER, Flat ---*--- | 4 | |
| -8 | 221C520-1 | . LOCK ASSEMBLY, LH (See figure 3-32 for BKDN) (ATTACHING PARTS) | 1 | |
| -9 | MS25281-F2 | . CLAMP, Loop plastic | 2 | |
| -10 | MS35207-263 | . SCREW, Machine pan hd. | 2 | |
| -11 | MS35207-262 | . SCREW, Machine pan hd. | 4 | |
| -12 | AN960PD10L | . WASHER, Flat | 8 | |
| -13 | 22K1-02 | . NUT ---*--- | 2 | |
| -14 | 221D580-1 | . LID LOCK RELEASE ASSEMBLY (See figure 3-33 for BKDN) (ATTACHING PARTS) | 1 | |
| -15 | MS35207-262 | . SCREW, Machine pan hd. | 3 | |
| -16 | AN960PD10L | . WASHER, Flat ---*--- | 5 | |
| -17 | MS35489-34 | . GROMMET, Rubber | 1 | |
| -18 | 102D450-3 | . RADIO BRACKET ASSEMBLY (ATTACHING PARTS) | 1 | |
| -19 | MS20426A4-6 | . RIVET, Solid countersink (0.125 dia. x 0.375 lg.) | 4 | |
| -20 | AN960PD6 | . WASHER, Flat ---*--- | 4 | |
| -21 | 102D125-13 | . HINGE (ATTACHING PARTS) | 2 | |
| -22 | MS20470AD3-8 | . RIVET, Solid hd. ---*--- | 8 | |
| -23 | 221C410-11 | . FITTING (ATTACHING PARTS) | 1 | |
| -24 | MS20470AD4-7 | . RIVET, Solid universal hd. ---*--- | 5 | |
| -25 | 221C423-11 | . BACK PLATE | 1 | |
| -26 | 221D460-11 | . PAD | 1 | |
| -27 | 221D230-25 | . PILE (Note 1) | 1 | |
| -28 | 221D230-27 | . PILE (Note 1) | 1 | |

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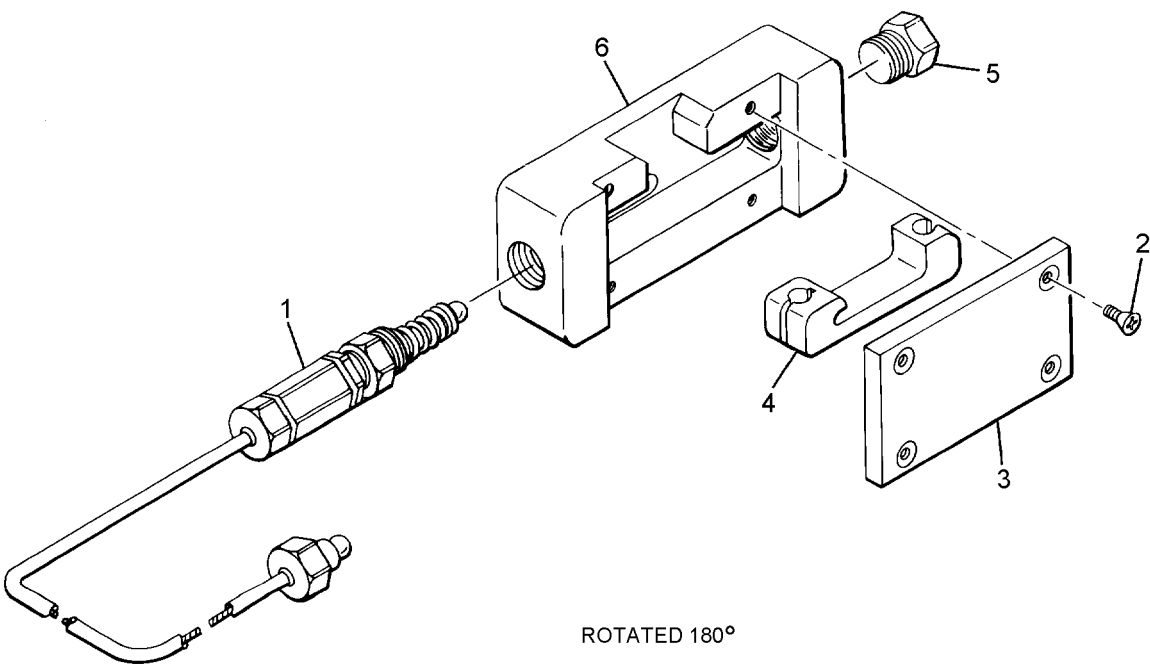
| Figure and Index Number | Part Number | Description 1 2 3 4 5 6 7 | Units Per Assembly | Usable On Code |
|--|----------------|---------------------------------|-----------------------|-------------------|
| 3-30-29 | 221D230-29 | . PILE (Note 1) | 1 | |
| -30 | 221D230-30 | . PILE (Note 1) | 1 | |
| -31 | 221B424-11 | . BUMPER'S | 2 | |
| | | (ATTACHING PARTS) | | |
| -32 | MS35206-232 | . SCREW, Machine-pan-head | 2 | |
| -33 | AN960PD6 | . WASHER | 2 | |
| -34 | 22K2-62 | . NUT, Hex | 2 | |
| | | ---*--- | | |
| -35 | 221J422-1 | . CONTAINER, Machined | 1 | |
| Notes: 1. Bond to lower container using #12 super-bonder or equivalent. Wipe area clean with Heptane. | | | | |



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Figure 3-31. Lock Assembly RH

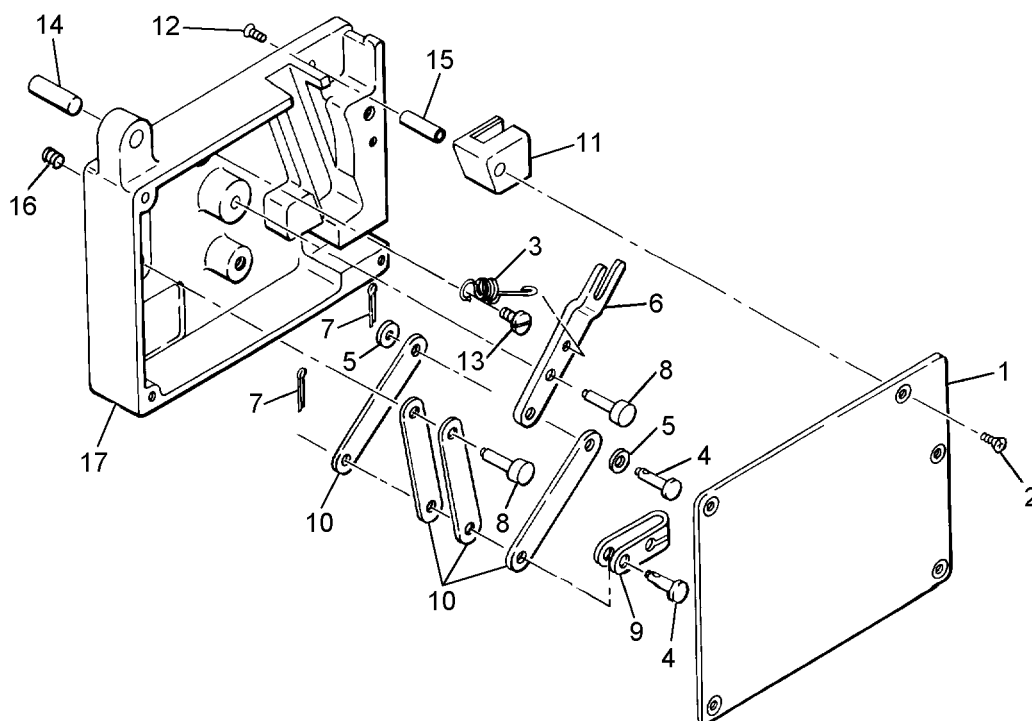
| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|----------------------------|--|--|-----------------------|-------------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-31 | 221C540-1 | LOCK ASSEMBLY, RH (See figure 3-30 for NHA) | REF | |
| -1 | 221D560-1 | . CABLE ASSEMBLY, Right | 1 | |
| -2 | 102C527-13 | . NIPPLE | 2 | |
| -3 | MS24693-S3 | . SCREW, Flathead (No. 4-40 x 0.312 lg.) (Note 1) | 4 | |
| -4 | 102C523-11 | . COVER | 1 | |
| -5 | 221C521-11 | . SLIDE | 1 | |
| -6 | 102C519-1 | . HOUSING ASSEMBLY | 1 | |
| | Notes: 1. Apply VC-3 (Thread Locking) Viscous Coating to threads (or equivalent). | | | |



63-939

Figure 3-32. Lock Assembly LH

| Figure and Index Number | Part Number | Description | Units Per Assembly | Usable On Code |
|-------------------------|---|--|--------------------|----------------|
| | | 1 2 3 4 5 6 7 | | |
| 3-32 | 221C520-1 | LOCK ASSEMBLY, LH (See figure 3-30 for NHA) | REF | |
| -1 | 221D570-1 | . CABLE ASSEMBLY, Rear | 1 | |
| -2 | MS24693-S3 | . SCREW, Flathead (No. 4-40 x 0.312 lg.) (Note 1) | 4 | |
| -3 | 102C523-11 | . COVER | 1 | |
| -4 | 221C521-11 | . SLIDE | 1 | |
| -5 | 102C526-11 | . PLUG | 1 | |
| -6 | 102C519-1 | . HOUSING ASSEMBLY | 1 | |
| | Notes: 1. Apply VC-3 (Thread Locking) Viscous Coating to threads (or equivalent). | | | |



63-940

Figure 3-33. Lid Lock Assembly

| Figure and Index Number | Part Number | Description | | | | | | | Units Per Assembly | Usable On Code |
|----------------------------|----------------|---|---|---|---|---|---|---|-----------------------|-------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| 3-33 | 221D580-1 | LID LOCK RELEASE ASSEMBLY | | | | | | | REF | |
| | | (See figure 3-30 for NHA) | | | | | | | | |
| -1 | 102C597-13 | . COVER | | | | | | | 1 | |
| | | (ATTACHING PARTS) | | | | | | | | |
| -2 | MS24693-S3 | . SCREW, Flathead (4-40) | | | | | | | 5 | |
| | | ---*--- | | | | | | | | |
| -3 | 102C584-11 | . SPRING, Toggle | | | | | | | 1 | |
| -4 | MS9462-05 | . PIN, Clevis | | | | | | | 2 | |
| -5 | AN960-C4 | . WASHER, Flat | | | | | | | 2 | |
| -6 | 102C583-13 | . LEVER, Actuating | | | | | | | 1 | |
| -7 | MS24665-1011 | . PIN, Cotter (0.312 lg.) | | | | | | | 2 | |
| -8 | 102C596-11 | . PIN, Pivot (0.312 dia. x 0.60 lg.) | | | | | | | 2 | |
| -9 | 221C581-11 | . CLEVIS | | | | | | | 1 | |
| -10 | 102C582-11 | . LINK TOGGLE | | | | | | | 4 | |
| -11 | 102C589-11 | . GUIDE | | | | | | | 1 | |
| | 102C588-1 | . HOUSING INSERT ASSEMBLY | | | | | | | 1 | |
| -12 | MS24693-S3 | . . SCREW, Flathead (4-40) (Note 1) | | | | | | | 1 | |
| -13 | COML | . . SCREW, (No. 4-40 x 0.312 lg.) | | | | | | | 1 | |
| -14 | MS9390-421 | . . PIN, Straight (Dia. .252 X 0.50 lg.) | | | | | | | 1 | |
| -15 | 102C594-11 | . . STANDOFF | | | | | | | 1 | |
| -16 | MS21209F1-15 | . . HELICAL COIL INSERT | | | | | | | 3 | |
| | | (For no. 10 x 32 x 0.285 lg.) | | | | | | | | |
| -17 | 102D587-11 | . . HOUSING, Machined lid lock release | | | | | | | 1 | |
| | | Notes: 1. Loctite sealant Grade A or equivalent. | | | | | | | | |

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